Exploring the use and the role of the Internet in Libya:

A study of Tripoli University and Azzaway University students

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Abstract

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The aim of this research is to explore the role of the Internet in Libyan society by understanding use of the Internet by the Libyan university students aged between 18-26 who are at Tripoli and Azzawya Universities, which are located in urban and rural areas respectively. The main contribution of this study is that it provides an understanding of the developments that might happen as a result of new communication technologies, especially the Internet. In order to address this research question, a mixed method approach, including quantitative analysis, was adopted to collect and analyse the main data. It used paper and online surveys of 861 students from both universities. It was followed by complementary qualitative interviews with five young Libyan parents and five media experts, and also thematic analysis of nine articles. The results are discussed in five sections: (A) level of Internet use and experience, and (B) purposes of using the Internet and online gratification; (C) anticipation of social, cultural and political online interactivities; (D) online daily interactivity; and (E) the potential development of a "new type of society" in the information age. The study found that the Internet is important in the lives of male and female Libyan university students in both urban and rural areas and it is playing an important role in developing their social, cultural and political lives.

The Internet has an important role in the university students' lives in developing their social, cultural and political aspects, which may lead to the emergence of a "new society" where they achieve social, cultural and political gratification and interact with an open world culture. The findings of this research offer recommendations which can improve understanding of the Internet's role in society. These include investigating, testing and analysing the role of the Internet in different sectors in society, institutions and organisations, for example within the education system, media environments and commercial departments, in order to measure the role of new communication technologies in developing countries.

Key words: Internet, Use, Role, University students, online interactivities, Development, "New society".

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I would like to present my gratitude to all my teachers and professors who taught me during all my stages of my education, from my graduation from primary school to my PhD. I owe to each professor who taught me thanks, appreciation and permanent respect.

Declaration

I am Mohamed O. A. Gharssalla and declare that this study has been composed and completed by myself, and it has not been accepted in any previous application for a high degree.

Mohamed O. A. Gharssalla

Dedication

This thesis is dedicated to:

The soul of my father who passed away in 1979 when I was eleven years old, he was very interested to my studies and dreamed of seeing me graduated from higher education.

My mother, the light of my life, the warm heart and shoulder who give me real power that has supported me in every step of my life, I pray to Allah more and more to give here good health and prolong her life.

My wife, the moon of my life, who stood next to me during the steps of this study

My sons and daughters, who are the stars of my life,

My brothers and sisters who stood behind me for every step of my studies

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Chapter 1: Introduction

1.1 Introduction

Since the mid-1990s, the Internet has become a global phenomenon that plays an indispensable role in society. As an extended social environment, the Internet becomes a meeting place where the young hang out with their friends to pass time (Gross, 2004). The 2002 Gallup Survey, (cited in Without Borders, 2006), noted that many young people prefer the Internet to other media, including TV, journals and radio. Therefore, as a communication tool, the Internet has an important economic, social, political and cultural role in the processes of life (Miège, 1997, Castells, 2011, Tang and Huhe, 2013, Salah, 2005), and thereby has created a "global village" (Melucci, 1996, Garon, 1999, Webster, 2005, Fuller, 1996, Castells, 2010, Castells, 2011, Devriendt et al., 2011, Albrow, 1996) as people have become closer and more connected online.

Arab societies have witnessed significant changes and developments that have resulted from the breaking down of borders and this new flow of information into societies. Internet use in Libya has become widespread; online connections have developed to include multiple devices in the home, cybercafés and mobile phones (Abo-harara, 2010, Abod-her, 2013, Ziany, 2010). Young people in Libya constitute both the largest sector of Libyan society and the greatest number of Internet users. They are estimated to account for approximately 85% of all Internet users in Libya. The use of the Internet in Libya grew by 3130.0% between the years 2000 and 2009, and in 2010 included 353,900 users, 70% of whom are young people, and 95% of whom use Facebook (The Silatech Index, 2010). By July 2014 this number had increased to 1,362,604 users (Internet Live Stats, 2014).

According to Trilling and Fadel (2009) the Internet has influenced every level of society, including education and both the public and private sectors. This role has grown quickly over the last thirty years, especially in the last decade. Indeed, social media may have played a large role in the revolutions of the Arab Spring. The Internet in this information age might therefore play an important role in social change, potentially leading to the emergence of a 'new type of society' (Van Dijk, 1999). It might transform the lives of young people, allowing them to satisfy their needs, have more freedom and develop their lives.

However, several small-scale Libyan studies have investigated this issue, and the majority of them focused only on the negative effects, based on the idea that it is dangerous to encourage open connection with the world. This might be due to the prevailing political atmosphere under the regime of Gaddafi or might stem from traditional Arab culture. There is therefore still a shortage of empirical research that attempts to answer key questions concerning the relationship between Internet use and the occurrence of social change. This yields questions about the frequent use of the Internet in which users navigate the web, perform their daily activities and satisfy their everyday needs.

This research attempts to produce a more holistic understanding of the use and the role of the Internet in university students' lives and explores the relationship between the use of the Internet and the emergence of a 'new society' (Harb, 2011). It surveys the Internet use of students at Tripoli and Azzawya Universities in Libya. Its ultimate aim is to fill a gap in the literature by understanding the role of new communication technologies, especially the Internet, in supporting social change, particularly in the context of developing countries (Van Dijk, J., 1999a, 23).

The key issues dealt with in the thesis are:

- A review of prior research on the roles of new media in Arab societies.
- A review of the various definitions of Internet use and its development in society.
- A review of the key features that enable the Internet to play a role in university students' lives.
- An evaluation of the general importance of, and the role played by, the Internet in driving change in society, and the potential emergence of a 'new society' (Hankiss, 1988, Van Dijk, 1999a, 230, Mahroum, 2011).

The following introduction sets out the background to this study in five steps: research importance and motivation, the choice of research society, research problems and aims, objectives and the study's contribution to current scholarly knowledge. This is followed by research methodology. Next is the study limitations, scope and rationale, and followed by a thesis structure and summary of the chapters.

It is essential to note that this research was proposed in 2010 in an attempt to discuss the use and the role of the Internet in Libya's society, and was initially carried out with the start of the war. The current research began in January 2011 and followed significant change in Libya's political situation and the danger of civil war in the country. Also, it is important to note that this research was started at C3RI Sheffield Hallam University and moved to Liverpool University after September 2013. The researcher presented and discussed the work at the Internet Research 13.0 Technologies conference, University of Salford, Manchester, 18-21 October 2012; at the 2nd Media Academics Forum in Manchester, Media City UK, 3-4 November 2012; and at the 3rd Arab Social Media Forum, Amman, Jordan, 15th December 2012. In 2015-16 this work underpinned further research supported by the UK Libyan Studies Association to explore these issues across the wider region.

1.2 Relevance of the research

As will be argued in the literature review (see Chapters 3), there are three key points that need to be investigated regarding the use of the Internet in Libyan society:

1. The extent and breadth of the spread of Internet use in Libya, especially by university students aged between 18 and 26. These are mainly university students who may have specific motivations and may seek to satisfy their social, cultural and political needs.

2. The impact of the information age via the Internet on university students' lives through the development of social, cultural and political awareness about global and local issues, since this may form a new kind of global cultural agenda in the media.
3. The information age and the network society may have led to the emergence of a 'new society' in Libya. This might have occurred partly because of the role of the Internet, on which university students conduct their daily online interactivity.

Four important points emerge from this framework, which form the aims, objectives and justification for this research:

1. To investigate Internet use and establish whether there are any differences between university students' gender and also between urban and rural areas – two variables for which Arab societies have traditionally shown considerable variation.
2. To describe the role played by the Internet and online interactivity in university students' lives.
3. To understand the process of social change in this age of the global village and new communication technologies.
4. Identify users' social, cultural and political gratification through the Internet and understand the effects of daily online interactivity on young people's behaviour.

1.3 Research motivation and the reasons for this study

The purpose of this study is to investigate and describe the role of the Internet in society and the emergence of new social forms. This might come about via online interactivity and the satisfaction of personal needs, which may in turn have had widespread effects such as being one of the causes of the Arab Spring.

Online interactivity, information exchange, the breakdown of borders might all influence society, so these issues need to be explored in order to understand the role of the Internet in a key sector of society – young people who are university students. A further focus of this study is on the demographic variable of the place of residence of Internet users, specifically whether they live in urban or rural areas. This study makes use of an advocacy and participatory worldview by placing the philosophical focus on the needs of the group (Creswell, 2007, 2009, Kemmis and Wilkerson, 1998). This analysis could therefore inform decision-makers when they consider the factors that can lead to social change.

The research applies a mainly quantitative model by administering a self-completed questionnaire survey. The survey was conducted in different locations in Libya in order to obtain samples from Tripoli University, as an example of an urban area of residence, and Azzawya University, as an example of a rural area of residence. The results of these surveys might help to identify how

university students use the Internet and seek gratification by interacting with the world in this information age. Additionally, these surveys were followed by qualitative online interviews with young Libyan parents and media experts such as Arabic and Libyan professors and journalists.

1.4 Choice of research subjects

1.4.1 University students

The study concentrated on university students aged between 18 and 26. In Libya, 73.48% of young people aged between 15-24 years old attend universities and higher institutional study programmes. There is a fairly even split by gender with 74.47% of women and 72.05% of men in higher education (UNESCO, 2013; see section 2.2.7, table 2-2, p, 24). Importantly for this study the majority of Libyan students attend University in their home city or region. As a result, comparisons between universities could reflect underlying regional variations. Moreover, in 2013, Libya came in fourth place in North Africa and fifteenth among the Arab countries in terms of the numbers of young people who access the Internet (Abod-her, 2013, p, 264). An earlier survey found that in Libya 70% of Internet users were young people (Al-Saidy and Al-Guery, 2008). Moreover, despite the tight government control at the time of the Gaddafi regime, young Libyan people were interested in browsing the Internet as a way of connecting with the world to obtain media information and exchange ideas (Al-Saidy et al., 2008). Those young people, as Internet users, played an important role in the Libyan revolution which has been called the 'Facebook revolution' (Ziany, 2010, p 43).

Libyan university students were the focus of this study for a number of reasons:

- Young people are more active than older people in engaging with new communication technologies, especially the Internet, and they are more interested in online activities (Al-Raood, 2012).
- The Internet has become more and more public due to the spread of new communication technologies (Abod-her, 2013, Allagui and Kuebler, 2011).
- Young people aged 18 to 25 have grown up with these technologies, and they conduct many of their daily activities online (The Silatech Index, 2011, Al-Raood, 2012, Philip, N., 2011, Arab Social Media Report, 2012).
- In Libya and other Arab countries, young people are the majority of the population (The Silatech Index, 2011, Allagui and Kuebler, 2011, Stepanova, 2011).
- In Arab countries, young people regularly use the Internet, especially social media (Hamdi, 2010, Shahira and Ali, 2013, M.A.S.R Arab Social Media Report, 2015).
- Approximately 65 % of the Libyan population are young and 70% of them access the Internet (Al-Saidy et al., 2008, Ziany, 2010, Abod-her, 2013, Arab Social Media Report, 2012).

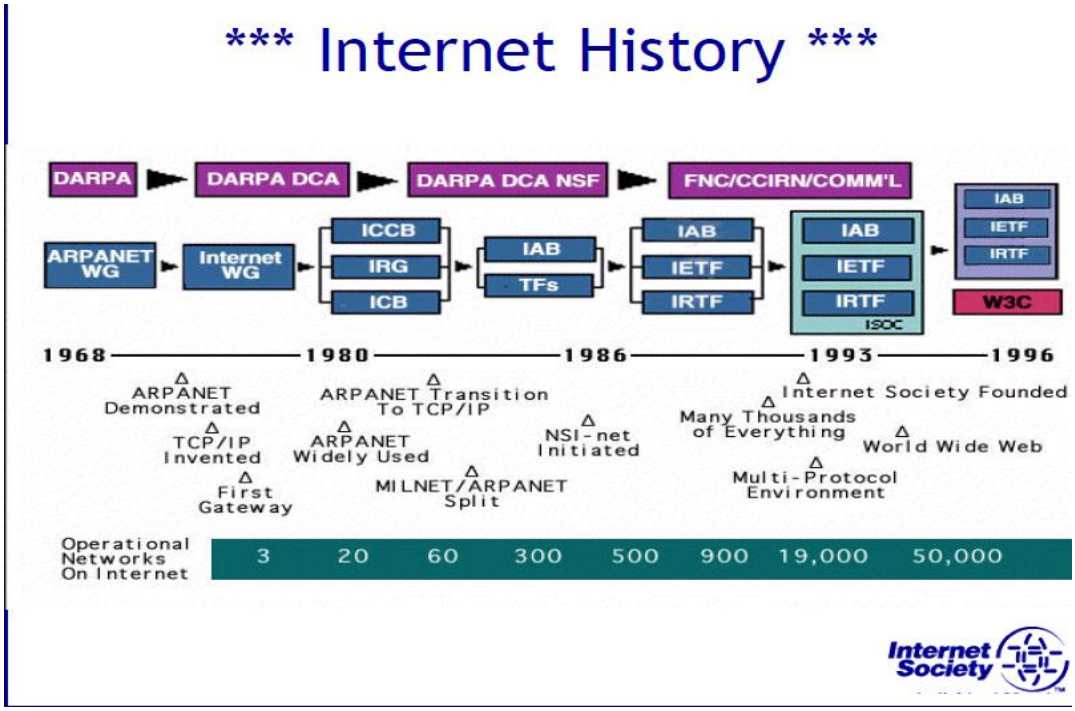
1.4.2 The Internet

The Internet has become a means of communications for social, cultural and political purposes which allows users to gratify their needs and engage in important daily interactions around the world. This chapter discusses definitions of Internet and then its history and user growth, particularly in Arab countries like Libya. It then gives a brief overview of the new Internet and social media such as Facebook, WhatsApp, Myspace, Google, YouTube, LinkedIn and Instagram.

The Internet's definition and history

There are various ways of defining the Internet. The word is composed of "inter", which comes from the Latin for "between" and is seen in words such as international ("between countries"), and "net", which is short for "network connection", (Hassan et al., 2000). The Internet incorporates educational, commercial, governmental and other kind of networking that use a common set of protocols. This network allows users to receive, react to and publish multiple kinds of information, such as text, pictures, audio, video, colours, and so making them available to other users. The Internet develops continuously, but it has its roots in the Cold War and in the need to connect the top US universities in order to share research data. It was the United States government that built the first robust computer network in the 1960s. In 1969 this proved successful and in 1971 Ray Tomlinson invented a system to send electronic mail, which was the next important step in making open connections through networked computers. In 1982 the term "Internet" was coined by the Defence Agency, and in 1984 its initial service appeared. Tim Berners-Lee invented the World Wide Web, a protocol for connecting documents and websites using hyperlinks in 1989; he aimed to create links between topics and organise information through hypertext (Berners-Lee et al., 1992). These hyperlinks lead to another place and allow the reader to choose the path that suits their needs best (Bryant, S., 2008) (see figure 1-1).

Figure 1-1: Internet history (Barry, 2003)



In the 1990s more than 40 million personal computers were sold worldwide, and the appearance of Archie, the first Internet search engine, marked the beginning of a new era of computing. The most dynamic developments were the categorisation of websites and the introduction of commercialised e-mails. In 1992 Mosaic appeared as an Internet browser and became popular; in 1994 the Netscape navigator became commercially viable, after which the Internet experienced an explosion across the world. Thereafter the Internet revolution gradually and widely spread across the world and Google and Yahoo appeared as popular Internet websites. The Internet became fully commercialised in the US in 1995 when the National Science Foundation Network (NSFNET) was decommissioned, and this allowed the use of the Internet to carry commercial traffic directly. The ensuing first expansion of the Internet took place in Europe and Australia in the mid and late 1990s and in the early 2000s in Asia (Mowery and Simcoe, 2002).

Internet user growth

The Internet can reach vast audiences and rapidly achieved a high level of development compared to the old media. The radio took 38 years to achieve an audience of 50 million, the TV took 13 years to reach the same amount, but the Internet reached the first billion in 2005, the second billion in 2010 and the third billion in 2014 (Internet live states, 2018). Less than 1% of the global population were Internet users in 1995, while today there are now up to 3 billion users worldwide. Moreover, the mobile Internet, especially smartphones, is contributing to the Internet users' growth because it provides benefits in every part of people's lives. According to The Arab World Online Report (2014, p 1), in the Arab world about '135 million individuals use the Internet in the 22 Arab countries, and including mobile penetration this number can be increased by around 110% on a regional level, and

also, there are more than 71 million active users of social networking technologies'. Arab Internet users jumped from being less than 0.5% of global Internet users to 36%.

The New Internet (Web 2.0)

Web 2.0 is used to describe development of technologies and allows users to share and create information. It makes online interactivity easier and enables users to participate more actively as they are now the senders, the creators and the receivers rather than being only the receivers. Moreover, 'Web 2.0 technologies (social software) are a real panacea for the challenges associated with the management of knowledge' (Razmerita, L., 2013). It allows users to create, organise, codify and share knowledge, and more important to socialise by extending users' networks by collaborating and organising knowledge that all helps to create new knowledge (Razmerita, L., 2013). It includes blogs, social media, and other social networking sites. Web 2.0 applications allow those users to be creative, write, publish, send, watch and listen to the contents. Therefore, Web 2.0 features as social media played an important role by allowing Arab users to be more active and outrun government control during the Arabic spring, 'as revolutions rock the Arab world in the 'Arab Spring' of 2011, we see, competing for people's attention, tens of thousands of blog posts, tweets, Facebook posts, YouTube and other videos, mashups, text messages, etc.' (Ray, T., 2011, p, 190). More recently there has developed concerns about 'filter bubbles@ where users only share similar and self-reinforcing content.

Social media

Social media is defined as 'a group of Internet-based applications that build on the ideological and technological foundation of Web 2.0, and that allow the creation and exchange of user-generated content' (Kaplan and Haenlein, 2010). Social media is different from the old media in many ways because it includes many of the features of old media but opens them up to interactivity. In 1994, Geocities was one of the first social media sites. It's enabled users to create their own sites (Walker, 2013). There are now many very popular social media sites, such as Facebook, Twitter, YouTube, Google, Myspace, WhatsApp, LinkedIn and Instagram. These allow users to interact online in various ways, including by writing, reading, posting pictures and watching and listening to audio-visual media. These features play an increasingly important role in the users' personal, social, cultural, political, educational and economic interactions. The tables (1-1) below presents social media's features and users in the Arab states:

Table 1-1: Social media definitions

	Key facts	Arab and Libyan users
Facebook	Launched in 2004 as a 'Harvard-only exercise. It has wide range of features, the Newsfeed, friends, the Wall, the Timeline, the Like, messaging and inboxes, notifications, groups, events, the Marketplace, Notes, Places, platforms, questions, photos, videos, chat, a development platform. Listen with Friends, Facebook Live, mood faces, phone, poke, smartphone integration, subscription (Parr, B., 2009).	It is the most-used social media channel in 10 countries including UAE, Qatar, Jordan, Palestine, Iraq, Yemen, Libya, Egypt and Morocco' (Arab Social Media Report, 2015, 21). In Libya, according to Internet world stats, (2016) in Libya Face book reached 2,800,000 users on June/2015, which was 42.8% penetration rate (Arab Social Media Report, 2015, 21).
Twitter	Appeared in 2006 as a result of research conducted by the Obvious Company in San Francisco (Carelson, 2011). Its features include breaking news, messages; peruse stream, tweeting, re-tweeting, following, browse interests, viewing suggestions, find friends and search for a keyword or topic, for tweets with links or for tweets near the user.	The Arab Social Media Report (2015, 21) noted that only 32% of Arab use Twitter. In Libya, The Arab Social Media Report (2015, 21) noted that it was used by less than 15% in Libya.
YouTube	It began on 14 February 2005 by three former PayPal employees who created a video-sharing facility (Lawler, 2012). It allows users to link annotation to external sites or match partners, custom thumbnails, monetization which allows users to earn money from users' videos, unlisted and private videos, live streaming, playlists, customisation options for user channel, such as branded banners and channel trailers, and live hangouts.	It was used in the Arab world by 39% and by 26% in Libya (Arab Social Media Report, 2015, 21).
Google	It launched as a research site project in March 1996, its search engine ranked websites based on number of other websites that linked to them. In 1997 domain of google.com was registered and it was incorporated in 1998, when it had an index of about 60 million pages. In 2004 Google launched its own web-based email service and in 2006 launched video (Cozy-digital, 2015). It developed its features of enabling group video chat, the sender bar, photo uploading, link sharing, tagging other users, profile icons and privacy features that allow users to choose who can view their information (Cozy-digital, 2015).	It reached 3.5 billion searches per day and 1.2 trillion searches per year worldwide.

Table 1-1 continued

	Key facts	Arab users
WhatsApp	It was launched in 2009 by Brian Acton and Jan Koum, who were former employees of Yahoo. It is a cross-platform instant messaging application that can be navigated across various devices such as Android, Black Berry, Window phone, iPhone and Nokia smartphones (Dabgar, 2014). It lets users exchange images, text, audio and video messages for free, offering a convenient way to communicate with other users, particularly internationally. It allows users to transfer multimedia such as videos, images and voice files to other contacts and to share locations (Thornton, J., 2012).	The share of Internet users in the Middle East and North Africa who use Whatsapp was about 75 per cent, down from 81 per cent in 2015. (The statistics portal (2017)).
Instagram	It launched in October 2010, it is a social networking medium that enables users to take, send, upload and share videos and photos and text, both on Instagram's platform and on other social media. It is an application for smartphones and iPads and is available through the Apple App Store, Google Play and the Windows Phone Store. In 2010 Instagram had one million monthly users, and this increased to 10 million in 2011, 30 million in 2012 and 80 million by the end of 2013.	The total number of active Instagram users in the Arab world is around 7.1 million in early 2017. Libya reached a number of accounts about 22.000 users. (Instagram Arab world 2017).
LinkedIn	It launched officially in May 2003, making it one of the oldest social media platforms. LinkedIn allows users to integrate images and video directly into their profile so that they can build an online professional identity and develop their professional networks. From 2009 LinkedIn started to extend its business, opening its first international office in the UK and reaching 33,077,647 users. In 2014 it had offices in 27 cities and 315 million users around the world (Alson, 2014).	20% of all LinkedIn users in the Arab region are based; firstly, in the UAE; then Saudi (16.2%); then Egypt (15.6%), then Morocco (9.5%) and Algeria (8.4%). Libya, Number of accounts: 158.000 users, Penetration rate: 2.5%. (The Arab Social Media Report – Feb 2017).
MySpace	It launched in 2003 and has risen in social networking in many countries. It is a social networking website that offers its users a variety of options for interaction through personal profiles, groups, music, photos, blogs and videos. In 2006 MySpace was the most visited site globally, although it was subsequently surpassed by Google, and it was the largest social networking in the world in 2008 before it was overtaken by Facebook. In 2009 it reached 800 million users, but MySpace's user base has declined and it now ranks 982 for traffic. It developed by engaging young adults with music videos, music and features (Digital Trend Staff, 2014).	In 2006 MySpace was the most visited site globally; In 2009 it reached 800 million users. According to Guenter et al., (2016) 28.3 per cent of Arab Gulf countries youth are using MySpace.

1.5 Research problem

The problem addressed in this thesis is that, while there is currently a high rate of Internet use in Libyan society, with young people, especially university students representing the majority. There is a lack of work that investigates the role of new communication technologies in Libya. Most of the existing studies focused on the expected negative effects on local cultural practice (Alghalban, 2007). The easy availability of information might develop users' information, minds and behaviour, and also break down censorship and control in a closed regime and traditional culture. Thus, the current research focuses on the role of Internet use in university students' lives. It does not aim to measure its positive or negative role, but rather to understand the role of the Internet in bringing about social change. It does this by evaluating and seeking to understand phenomena which might have played an important role before and during the Arab Spring. This will guide the study question, establish whether there is any evidence that Internet use can lead to gratification and see whether this can in turn improve, guide and potentially develop university students' opinions and online behaviour. The primary goal of this thesis is not therefore to focus on gender or area inequalities, although these will be explored as part of the data collection. The thesis contrasts these to both prior expectations from existing Arabic literature and uses them as markers of potential change in aspects of social, cultural and political expectations.

1.6 Research aim, objectives and study questions

The overall aim of this study is to investigate the role of the Internet in Libyan university students' lives and the relationship between Internet use and the potential for the rise of a "new society" as a part of the global village in the information age. This is further explained by frameworks and theories described in chapter 3 and analysed in chapters 5, 6 and discussion in chapter 7.

Objectives

1. To understand the surveyed university students' use of the Internet and describe any differences between urban and rural areas and between the genders. This description will examine experiences of Internet use and includes such factors as the ownership of computers, use rate; time spent online and place of connection. Also, this description seeks to examine any difficulties or obstacles that might occur as a result of Internet use.
2. To ascertain the respondents' purposes and motivations for using the Internet and how, if at all, they are socially, culturally and politically gratified online, and again to describe any differences that occur in this regard between urban and rural areas and between the genders.
3. To explore whether university students' online interactivity anticipates social, cultural and political impacts on society through the Internet's influence on Libyan university students' lives. Also, to explore users' awareness and the elements those persuade them to browse Internet sites and would help to achieve their goals.

4. To explore the argument that the Internet has an influence on society through users' online interactions and to assess measurements of users' online behaviour and interaction with Internet content. Also, to measure and assess users' opinions and feelings about the Internet in order to discover the extent to which they are happy and to which the Internet has an influence on their lives'.
5. To combine the results about university students' use of the Internet and use them to consider the Internet's potential role in the development of society at the time of the information age, and indeed to consider whether such a new society might emerge.

Study questions

Below are the study questions that were addressed in this research. These study questions were divided into four areas to achieve the study objectives. Those four sets of questions guide the study in its literature review, data analysis and discussion of the results. The first set of questions is related to users' level and experience of Internet use and computer ownership.

RQ1: How many Libyan university students have computers and to what extent do they use the Internet?

RQ2: How many Libyan university students have experience of using the Internet?

RQ3: Do Libyan university students face any difficulties in using the Internet and, if so, what are they?

The second set of questions is related to the purpose of and motivation for Internet use and the social, cultural and political needs it can satisfy.

RQ4: To what extent do Libyan university students find that the Internet easily satisfies their needs?

RQ5: For what purposes do Libyan university students use the Internet, and which needs do they satisfy online?

The third sets of questions anticipate the social, cultural and political role of the Internet, which might include the Internet developing users' awareness.

RQ6: How do Libyan university students interact online and to what extent are they interested in social, cultural and political content?

RQ7: What relationship is there between users' awareness and elements to persuade them to navigate sites, and to what extent are Libyan university students aware of Internet content?

RQ8: Which sites do Libyan university students use and which are the most used for gratification?

The fourth set of questions is related to daily online activity and the potential development of a new society through the role of the Internet in the era of information. The Internet can function as a location in which people can spend their time and develop new relationships, political ideas and interactions with social, cultural and political content from around the world.

RQ9: How do Libyan university students interact with Internet content and to what extent are their interaction creative?

RQ10: To what extent are users' content with the Internet and how do they feel about its role in their lives?

RQ11: To what extent has Internet use made Libyan university students part of a global village and a part of the information age, and does this imply the emergence of a new society?

1.7 Expected contribution to knowledge

There is a gap in our understanding of the role played by the Internet in the Arab world, especially in Libyan society. Moreover, there is a lack of empirical studies that relate to the impact of the Internet on the circumstances and social, cultural and political developments of Libyan society.

The implications of the study will be very helpful for academic understanding of Libyan society and will give the Libyan government information on which to base its evaluation and analysis of the development of an information-based society in the country. It importantly emphasises the role of the media and new communication technologies, which might be considered a historical development in Arab, and especially Libyan society and universities.

This study may further contribute to our understanding of the change happening in society and the extent to which the Internet can help to improve and develop a society and country. It might also be possible to determine whether the Internet acts as an impetus for social change deriving from its social, cultural, and political content or by establishing an atmosphere of social change among its users.

1.8 Research methodology and research paradigm

This project adopts a quantitative research approach, which is complemented by qualitative data and a thematic documentary analysis (Creswell and Clark, 2007). It surveyed 900 and achieved 861 samples of Libyan university students using both online and paper surveys. Additionally, online semi-structured interviews were conducted with 5 experts and 5 parents of students. Those interview samples are not representative of the overall population but are sufficient to provide complementary data and to give a valuable insight into the views of a range of users' parents. Also, thematic article analysis was conducted to provide additional data to support the study. A further complementary series of interviews with a sample of academics and journalists was conducted as they could provide additional information that would support the main data collected by the study.

1.8.1 Research philosophy

The philosophical standpoint of the research is important in providing a more accurate justification of why and how the study practice is selected. It is influenced by the manner in which any development of knowledge influences the way the study is conducted (Saunders et al; 2009). There are several reasons for being aware of and taking into consideration the study's philosophy. These include identifying the final design of the study provided from philosophy, acknowledging the limitations of the study and selecting the most appropriate, acceptable design of it, and providing an opportunity to choose analysis tools for different contexts (Easterby-Smith et al, 2008).

A paradigm, as defined by Taylor et al., (2007), is 'a broad view or perspective of something' (p.5) and was also defined by Denzin et al., (2006) as 'the basic belief system or worldview that guides the investigation' (p. 105). Thus, there are two main paradigms in research including positivism and interpretivism, (Easterby-Smith, et al (2008), Teddlie & Tashakkori (2009), Denizen and Lincoln (2000), Bryman (2008) and Creswell (2007). These two paradigms are related to underlying epistemologies which underpin the assumption of how knowledge can be gained, Mayers (1997). According to Myers (1999), Maxim (1999), and Crossan (2003), there are several justified reasons for the importance of adopting a philosophical perspective for research methodology, including:

1. It might help to create and innovate the appropriately selected and adopted methods.
2. It might help to clarify the study strategy.
3. It helps to avoid choosing inappropriate methods which may harm research results.
4. It helps researchers to know methods which are outside their experience.

Positivist paradigm

According to Easterby-Smith et al., (2008), positivism is a philosophy which sets out to find evidence for issues that exist in the social world. It also relies on measuring outcomes via objective methods and is related to research aimed at testing elements of social phenomena. Another definition noted by Carson et al., (2001), Hudson and Ozanne (1988) and Thompson (2000) is that positivism is a term used to describe a particular approach to scientific investigation, whether it is natural or social. It defines positivist methods as:

"Approaches to the social sciences [that] claim the label scientific, for they assume things can be studied as hard facts and the relationship between these facts established as scientific laws" (Smith, 1998). Moreover, although it is less dominant now than in the past, positivism remains a pervasive influence at both an explicit and implicit level. Thus, contemporary approaches defined as positivist accept that researchers might not be able to observe the world of which researchers are part as objective and disinterested outsiders and acknowledges that the natural sciences do not provide the model for all social research. In the social sciences, Maxim (1999) emphasised that the positivist approach has contributed a great deal to the philosophy of science. The reality for positivists is

separated from the individual who merely observes it because it is objective, independent of the researcher and can also be described by measurable properties. According to Carson et al. (2011) and Hudson et al. (1988), one goal of the positivist research is to establish a time and context-free generalisation, and they thought that this is possible because the human action can be explained as a result of real purposes that precede their behaviour. Positivism relies on the premise that there is a reality that can be studied, understood and captured, and therefore it is appropriate for research into media and communication, as well as information systems, all of which attempt to examine and explore human behaviour.

Interpretive paradigm

The interpretive paradigm is useful to researchers who are interested in understanding social phenomena via meaning which is concerned with analysing for instance language, consciousness, shared experience, publications, tools and other artefacts (Walsham 2006). According to Cohen, Manion & Morrison (2007), the paradigm enables researchers to 'understand, explain, and demystify social reality through the eyes of different participants' (p.19). Lee (1991) pointed out that the interpretive paradigm assumes that people create and attach their personal meaning to the world around them, also to their behaviour which they exhibit in this world. Furthermore, the emergence of this paradigm is due to the inadequacy of methods used in natural science when applied to social aspects. Moreover, Mayers (1997) noted that interpretive studies collected data in order to deduce possible meaning and understanding of the phenomena being studied. However, Pather and Remenyi (2004) pointed out that more than simply interpreting it could, through active involvement and observation, understand the human constructs concerned. Also, Weber (2004) noted that it cannot separate reality from the individual who observed it. This leads to select and use an interpretive paradigm which gives reasonable outcomes and can achieve the understanding of the situation (Stahl, 2005).

1.8.2 Selection of research paradigm

Regarding the research aims and objectives, a mixed approach has been taken that is influenced more by an interpretative approach. This has been justified by the literature review and evaluative description of the study outline. The beliefs and values in research constructed according to the positivist and interpretive approaches are adequate and favourable to obtain implied knowledge (Higgs, 2001). Interaction and human perception lead us to view the world as socially constructed, and this interpretive paradigm is suitable for this study.

It allows the study to understand what Internet users do and believe and how they feel in order to interpret the influence of the Internet on people's lives as an example of the reaction between ICT and humans. It is also suitable for quantitative measure of Internet use and users' behaviour and interactivity which causes the Internet to have an influence on their lives. As for data collection, this paradigm uses both quantitative and qualitative research approaches. It is, according to Creswell

(2003) aimed at facilitating understanding of the context of society and organisation and is based on building a complex aggregate picture, reporting the detailed views of participants, formed with words, and also conducted in a natural setting. More significantly, Walsham (2006), Andrade (2009) and Jabar et al. (2009) all emphasised the growth in acceptance of this paradigm among new media research in recent years, and this was happening because of the shift in new media studies from a focus on technological to behavioural issues (Rohade et al. 2009). In fact, according to Mansour & Ghazawneh (2009) the majority of media studies were interested in matters of design, implementation, acceptance, management use, and evaluation in various organisations and social contexts. Based on that explanation, Internet studies could be considered contextual because of the interaction between the human and technical, which shows real dynamic interactivity. It is a kind of adoption and usage of ICT research which might need to concentrate on adequate, quantitative and qualitative methods.

1.8.3 Rationale of research approach

According to Saunders et al (2009), there are two main approaches to the development of theory, which include the inductive and deductive approaches. The inductive method generates theory as a result of data analysis and evaluation, while the deductive approach designs and tests theory and hypotheses. Moreover, Creswell (2003) emphasised that the aim of choosing methods is to specify the type of information to be collected. This should be in advance of the study in order to allow this method to develop from samples in the project. Furthermore, participant voices as a data source might be numeric information or recorded and reported which could be obtained through either quantitative or qualitative methods. He also noted that the deductive approach uses theory as a plan of the study, whereas qualitative methods tend to adopt an inductive approach to build data via multiple elements to generalize a theory or model. Thus, both quantitative and qualitative methods are used to collect data from participants that could be used singly or might be mixed or follow each other as complementary methods.

Deductive approach

The deductive approach as a research process is used for testing by empirical observation, as well as the developing of a conceptual and theoretical structure (Collis and Hussey, 2003). This approach embraces all concepts, as long as they are grounded on a logically structured basis, in order to collect and analyse data to test topics and thus support the general ideas. It also allows the researcher to begin with theoretical hypotheses, principles, and laws. Moreover, observable data should be coordinated with the logic of theory and its topics. In other words, this approach takes a lot of information that the researcher may have gathered or general information to check theories, laws or a principle and directly tries to draw results from this.

Inductive approach

The inductive approach is defined as simple observation through to general theory, and it develops theory from the observation of empirical reality by moving from bottom to top and from specific to general (Collis and Hussey, 2003). In other words, its process is conducted and initiated by collecting data which is related to topics of interest and employs specific data to develop generalisations or theories that explain this data. According to Collis and Hussey (2003), the inductive research develops a theory from the observation of empirical reality. The research looks for patterns in the data and works towards developing a theory which could explain those patterns by moving from data to theory or from the specific to the general. In other words, it is based on thought or inductive reasoning which turns a simple observation into a general theory, by taking one piece of information and trying to generalize from there.

1.8.4 Nature of the Study

The study used surveys as the main method followed by complementary interviews and thematic article analysis. The surveys were conducted with university students in two ways including paper and online surveys. The survey questionnaires covered the objectives and main study questions to investigate the issue studied. As emphasised in the methods discussion (see chapter 4) those surveys were followed by a secondary strategy of online interviews conducted to provide additional data as evidence to justify the study topics. Here we would discuss study limitations, scope, and rationale of the study and the structure of the thesis outline.

1.9 Limitations

The limitations of the study are related to the inability of the researcher to travel to the country because the ongoing civil war made travel impossible. This meant that the survey samples were conducted remotely by faculty departments who accepted the responsibility for monitoring the academic survey process. Additionally, online survey samples were conducted through the closed Facebook groups of the Libyan universities. There are only a few parents who have children at university and who could participate in the study interviews. The experts were chosen due to their relationship with the researcher, which ensured that they were interested in doing online interviews. In addition, the main data used for this study came exclusively from Libyan university students in both Tripoli (the capital) as an urban area, and Azzawya University which is situated in the south-west of Libya in a rural area. While the research was being conducted, Libya underwent historical changes that placed the Internet use centre stage, and which might demonstrate the actual influence of Internet use (Stepanova, 2011). This gave greater impetus to carry on this study as a vital thesis subject that was necessary to investigate the factors and elements at work in the current situation.

1.10 Structure of the thesis

The principal aim of this study is to explore the issues outlined above. The study follows the approach of Phillips and Pugh (1994) and has four elements: background theory, focal theory, data theory and novel contribution. The study is divided into two parts and has ten chapters. The first part is divided into five chapters:

- Chapter 1 presents an introduction to the study and the motivation and reason for it. It presents a short overview of research subjects includes university students and the Internet especially Web 2.0. It also presents an outline of the thesis, including the research background, research aim, objectives and questions, the research's contribution and the nature of the study.
- Chapter 2 presents the structure and development of media in Libya, considering the country's geography, history, economy and political framework. It also presents some background on Libya's population, social framework and education system. Furthermore, it describes the situation in Libya during the Arab Spring and the subsequent civil war. Importantly, this chapter illustrates the development of media and communications in Libya including the history of the press, radio, television and new communications media there, ending with a focus on Internet connections in the country.
- Chapter 3 reviews the literature review, includes theories that were used as a framework for the research and presents previews studies as background. It describes the information age and network society theory and explains the concept of the global village created by young people using the Internet. Use and gratification theory as part of media effect theory are then discussed to provide a wider background to Internet use. It focuses on essential points: network society in the information age, measurement of Internet use, media effects and the role of communication in the Arab Spring. The later parts of the chapter present interactivity theory and agenda setting theory as part of media effect theory and is reviewed as a second tool that can be used to explain the role of the Internet on young people's lives. This followed by background focuses on the role of the new media in closed regimes, young Libyan people's awareness, communication and social change.
- Chapter 4 describes the study's methodology and fieldwork paradigms and approaches. The main research data was obtained by conducting paper and online survey questionnaires with university students in order to provide details about the use of the Internet and how it is gratifying, as well as data about online activities and feelings of satisfaction. Complementary data was obtained through interviews and thematic journal analysis. This chapter presents the study society, samples, language used and questionnaire design, followed by a description of the study field of data statistical analysis.

The second section of the study is divided into three chapters.

- Chapter 5 and 6 present the main results of the online and paper surveys and examines this main data in light of the study's aims and objectives. They deal with the issue of Internet use: when is the Internet used, for how long, where and for what. They explore how needs are satisfied, online interaction and feelings and opinions about the Internet. They are based on the two study variables of area of residence and gender. They present the social, cultural and political factors relevant to the topics and study objectives. They also present complementary and additional data obtained from interviews and thematic analysis. They examine data by studying variables and factors to be joined with the main results in the previous chapter. They explore the opinions of parents of Libyan young people, note how their children use the Internet, and also explore the role of the Internet in Libyan families, particularly when children use it. Data from interviews with media experts is presented and their opinions and comments are explored. Finally, they present a thematic analysis of data from journal articles that were used to create a case study, narrowed down from an international perspective to Arabic and Libyan one.
- Chapter 7 presents the ideas and discussion elements that respond to the study questions. It focuses on the main points and ideas as a result of the research and summarises the study's academic findings.

1.11 Summary of the chapter

In this chapter an introduction to the study was made, focusing on the research background and context, which is based on a literature review and on having identified a research gap. This chapter presented an outline of the research and discussed the justification for this research, including the variables, factors and elements that have informed the study objectives. It introduced the research background and context and described the need for this research, the reason for the study and the choice of research subjects. Then it presented the research aims and objectives in the form of the study questions, which were divided into four sections regarding the study objectives and the study's contribution to knowledge. Next it described the nature of the study and its limitations, scope and rationale. Lastly, it presented the structure of the study. The next chapter discusses the structure and development of the media in Libya.

Chapter 2: The Structure and Development of the Media in Libya

2.1 Introduction

This chapter explores the Libyan context. It is divided into two sections. It begins with an introduction to the country, including its geography, history, economy and political framework, as well as its present population and social networks, and education system. The second part presents the development of media and communications in Libya, giving an overview of history of these media, including the press, radio and television. This is followed by a brief overview of new communication technologies and Internet connections in Libya.

2.2 Country background and characteristics

2.2.1 Libyan geography

Libya is located to the west of the Arab countries and in the middle of North Africa with a coastline of nearly 1,770 kilometres on the Mediterranean Sea (CIA, 2011). It comprises 1,759,540 square kilometres with a border of nearly 800 kilometres in the south across the Sahara Desert. It has borders with six countries: Tunisia and Algeria to the west, Niger, Chad and Sudan to the south and Egypt to the east. A large part of the country lies in the Sahara, which affects population density due to the lack of habitable areas. Libya's climate is Mediterranean, with mild, rainy winters and hot, dry summers.

Figure 2-1: Map of Libya (Source: Ezilon map (2015), http://www.ezilon.com/maps/africa/libya-physical-maps.html)

2.2.2 Historical background

Libya has been colonised many times in its history by other countries and states and was notably under Ottoman Turkish rule from 1551 to 1911 (Anderson, 1984). In 1911, Libya was colonised by the Italians until the Second World War, after which it came under the control of the USA, Britain and France. Subsequently Libya was governed by the three countries: Britain in the east based around Cyrenaica (Benghazi), the USA in the west based in Tripolitania (Tripoli) and France in Fezzan in the south, based around Sabha (US, 2007). On 24th December 1952, Libya declared itself an independent monarchy based on a UN resolution; it subsequently became a federal country with three regions based around the major cities: Tripoli in the west, Barga (Banghazi) in the east and Fezzan (Sabha) in the south. In 1963 the Libyan parliament declared the country to be one state. In September 1969 a coup d'état overthrew the Libyan monarchy and the military commander Colonel Gaddafi ruled the country until August 2011.

2.2.3 Economy

Until the discovery of petroleum in 1961, Libya was one of the poorest countries in the world. National oil income increased in 1972-73 when the government nationalised all the subsidiaries of foreign petroleum firms in the country, taking 51% ownership of them all. This occurred at the same

time as the price of petroleum rose, which meant that Libyan receipts significantly increased, and the country's economy became closely linked to world oil prices (Al-Jhemy, 1992). Moreover, since that time the Libyan economy has relied on petroleum, whilst maintaining other objectives such as the development of agriculture, industrialisation, housing and transportation (McDaniel, 1982).

Oil income was used to develop the country and provide many facilities to modernise life for its people, which gave Libya the highest per capita income in North Africa and GDP growth of 5.8% in 2007 (World Facts Index, 2008). However, according to Agnaia, (1997, 117), 'the regime's economic action led to severe restrictions on Libyan citizens going abroad for training and on experts from outside the country coming to Libya for technical consultation, as well as an inability for Libya to obtain modern technology and developments from the West'.

2.2.4 Political framework

Modern Libyan political history was established in 1952. Libya was a monarchy for 18 years led by Idris Essnossea. In 1969 an army group abolished the monarchy following a coup d'état, and the country adopted a new republican political system with Colonel Gaddafi at its head. This regime governed the country for 42 years from 1969 to 2011, but in 2011 young Libyans demonstrated in the streets and revolution erupted across the country. Gaddafi was the only leader of the country for nearly 42 years, first as a republican state for seven years until March 1977, then under a system known as Jamahiriya, a regime which lasted until 2011. The politics of this regime were based on the ideas of the 'green book' written by Colonel Gaddafi (Vandewalle, 1998). Thus, for four decades Libya was governed by a popular committee government, with Gaddafi as the top leader of the country; this was supposed to be applied by the mass of people themselves in a unique form of direct democracy.

2.2.5 Population and social framework

Libya has a small population compared to its neighbouring countries that was estimated at 6.5 million (CIA, 2011). Nearly 86% of the population reside in urban areas, mostly in the towns and villages on the coast from Tubrok in the North East to Zwara in the North West. Tripoli is the capital city and has approximately 1,750,000 habitants; Benghazi in the east is the second city with nearly 1,000,000 inhabitants (St John, 2012). The rest of the population reside in the mountains in small cities, towns and villages such as Gherean, Yfreen, Al-Zentan and Nalout. Some people also live in the Sahara Desert in small cities, towns and villages such as Sabha, which is the biggest city in the desert, Aljorfa, Al-Kofra, Morzoq and Aobaree. In this study urban area refers to the three big Libyan cities; Tripoli, Benghazi and Sabha and the rural refers to small cities and towns such as AZzawya, Tobrok, Gherean, Zwara, Sabrata, Zentan, Nalout, ElBaida, Musrata, Jado, and Yefren.

In fact, 'Libya has undergone spectacular urban transformation in just a few years, owing to petroleum revenues (Kharoufi, (1996, 1). The Libyan population increased by 1.83% in 2005 and has

continued to increase rapidly in the last decade. Moreover, the gender gap decreased to a ratio of 103 men to 100 women in 2006. Libyan social culture is based on Islamic (Malikia) and Arabic culture; it is a Mediterranean and Saharan country, and its society is based on family and tribal adherence. These have profoundly influenced Libyan cultural behaviour (Makhlouf and Zughoul, 1996).

2.2.6 Libya's education system

In order to understand how young people aged 18 and over perform in higher education, some key features of the national education system should be described. This is particularly important when it comes to justifying the choice of universities as a location for the current study. For the last twenty years the Libyan education system has adopted a program that develops students gradually. Libyans aged between 5 and 25 years old were in the education system from primary school to undergraduate level, where they study at university or in another form of higher education institution (UNESCO, 2013).

Essential education includes primary school, which starts at the age of 5, and secondary school, and people are obliged to go to school, which is free, although there are fee-based schools in some cities and towns. Secondary school lasts from the ages of 11 to 14, and middle education includes college and professional middle education and lasts from 15 to 18. Undergraduate level study, including higher education degrees, is undertaken at institutions such as universities and other higher institute professional education establishments, all of which start at the age of 18 (Clark, 2004). The number of Libyan students in higher education in 2009 was 300,966, and among these 173,000 were women (League of Arab States, 2013, 118).

2.2.7 Universities

In 1970 Libya had only two universities, but it had a total of fourteen in 2009 (Bodhear, 2013):

- The University of Benghazi
- The University of Tripoli
- The University of Al-Jabal Al-Gharbi
- The University of Misratah
- Omar Al-Muktar University
- The University of Surt
- The University of Sebha
- The Open University
- Az-Zaetona University
- University of Asmarya for Islamic Studies

- Higher study Academy
- Mohamed bin Ali Isanosee University
- AzzawyaUniversity
- Al-Mergab University

There are also three private universities:

- Africa University – Benghazi
- African National University – Azzawya
- Libyan International University – Benghazi

Benghazi and Tripoli universities are the oldest and largest universities in Libya, and they encompass both urban and rural areas. The number of students increased from 13,418 in 1976 to 204,332 in the academic year of 1999-2000 and 340,156 in the academic year 2009-2010.

Table 2-1: List of Libyan Universities (Libyan Minister of Higher Education, 2013)

كشف بأسماء الجامعات
والاكاديميات الليبية الحكومية ومواقعها الرسمية الالكترونية(2013)

Libyan Public Universities

Their official websites

Current Title	Previous Title	الموقع الالكتروني الحالي Current official website	الاسم السابق للجامعة	اسم المؤسسة الحالي
Benghazi University	Garyounis University	www.benghazi.edu.ly	قاريونس	بنغازي
Tripoli University	Al-Fatah University	www.tripoli.edu.ly	الفاتح	طرابلس
Sebha University	Sebha University	www.sebhau.edu.ly	سبها	سبها
Omar Almukhtar University	Omar Almukhtar University	www.omu.edu.ly	عمر المختار	عمر المختار
Azzawya University	Azzawya University	www.zu.edu.ly	السابع من ابريل	الزاوية
Misrata University	Misrata University	www.misuratau.edu.ly	السابع من اكتوبر	مصراته
Sirt University	Al-tahadi University	www.su.edu.ly	التحدي	سرت
Aljabel Algharbi University	Aljabel Algharbi University	www.jgu.edu.ly	الجبل الغربي	الجبل الغربي
Al-Mergib University	Al-Mergib University	www.almergib.edu.ly	المرقب	المرقب
Alzzaytuna University	Naser N University	www.azu.edu.ly	ناصر الاممية	الزيتونة
Libyan Academy	Higher Studies Academy	www.alacademia.edu.ly	اكاديمية الدراسات العليا	الاكاديمية الليبية
Asmarya University for Islamic Sciences	Asmarya Islamic University	www.asmarya.edu.ly	الاسمرية للعلوم الاسلامية	الاسمرية الإسلامية
Open University	Open University	www.openu.edu.ly	المفتوحة	المفتوحة
Mohamad bin Ali Al Sunosi	-		-	محمد بن علي السنوسي

According to the Libyan UNECCO report for the years 2005-2010 (see Table 2-2, p, 26), 73.48% of young Libyans aged between 15-24 years old attend universities and higher institutional study programmes; 74.47% of women and 72.05% of men are in higher education studies (UNESCO, 2013).

Table 2-2: Libyan population depending on age, gender and education 2013. (UNESCO, 2013)

Libyan population depending age, gender and education 2013 (UNESCO)

Enrolment ratio			Population			Enrolment numbers			
Total	Females	Males	Total	Females	Males	Total	Females	Males	Age
13.05	13.11	12.99	213060	103897	109163	27805	13620	14185	5-4
91.13	90.88	91.38	107138	52397	54714	97639	47616	50023	6
94.49	94.35	94.62	105593	52016	53577	99769	49076	50693	7
95.84	95.68	96.00	103123	50645	52478	98838	48458	50380	8
96.92	96.77	97.07	105863	51866	53997	102604	50191	52413	9
97.41	97.33	97.49	105886	51942	53994	103139	50550	52589	10
99.01	98.91	99.10	107345	52353	85001	106289	81783	54506	11
99.77	99.75	99.79	108745	53405	55340	108499	53274	55225	12
99.41	99.40	99.41	111027	54519	56508	110369	54194	56176	13
99.71	99.69	99.73	109881	53404	56477	199562	53237	56325	14
95.77	94.14	97.93	114241	56267	57974	110208	53436	56772	15
95.77	94.34	97.37	114162	56311	57851	109337	53010	56327	16
94.15	92.14	96.10	114747	56448	58299	108038	52011	56027	17
9149	89.21	93.71	115881	57172	58709	106021	51003	53018	18
82.87	83.58	82.17	113995	56260	57735	94464	47022	47442	19
46.08	50.62	41.62	573287	283624	289663	264154	143582	120572	20-24
75.59	76.32	74.71	2323983	1142526	1181457	1756735	872063	882673	Total

2.2.8 The Libyan revolution and Arab Spring

Libya underwent a revolution in 2011 following the Arab Spring, which started in Tunisia with the overthrow of the Bin Ali regime and was followed by the overthrow of the Mubarak regime in Egypt. Libya emerged from the Arab Spring, called elections and adopted a liberal political system (World Politics Magazine, 2011, 84). The Arab Spring in Libya lasted from 17 February 2011 until the murder of Muammar Gaddafi on 20th October 2011.

In 2011 political news sites such as Alwatan, AlMahata, Libya-alyoum, Qurena, BBC, Aljazeera, Alhura and AlArabia were frequently visited by Libyan users (Alexa, 2011). Therefore, it seems probable that the Internet played an important role in the Arab Spring. The first calls for demonstrations and revolution on 17th February were made on a Facebook page, and young Libyans played an important role in the war not only as fighters but importantly as Internet users and online content creators. From October 2011 Libya has been governed by the NTC, and the country held an election on 7 July 2012 for the National Congress and elections for the Libyan parliament on 25 June 2014.

2.2.9 Libyan society during the civil war

Libyan society is deeply affected by the civil war since the end of the Gaddafi regime. From the end of 2011, Libyan society fell into civil conflict. This appeared due to the proliferation of weapons and ammunition and the emergence of many kinds of militias including tribal and jihadist militias groups; these make Libyan daily life very dangerous, even in the three big cities. Moreover, society economy and family income are weaker, and people suffer from lack of access to money due to lack of bank notes. After the end of the Gaddafi regime, the country passed into several civil war stages. The first was on 25th September 2012 when the National Transitional Council issued Decision No: (7) for the

invasion of Bani Walid town. This was considered a kind of civil war and caused tribal animosity and revenge (Al-arbia 2014). The second civil war step was called ‘Fajr Libya'; it started on 18th July 2014 around Tripoli Airport and south-west of Tripoli and caused the destruction of the Airport and most of the airplanes. The third war step was the Benghazi Anti-jihadist war, called the ‘Alkarama war' of the national Libyan military to expel the jihadist groups. The fourth step was in Sert city between Tripoli in west and Benghazi in the east of Libya. This city fell under the hand of ‘Daash' (the Islamic state), as a part of ‘Daash' in Syria and Iraq (BBC, 2016). For seven years Libyan society has been in bad shape. It has two governments that do not control the territory of Libya and do not impose security. Militias continue to fight daily especially in large cities. Women, children, young people, families and old people are the most victims of this civil war and the decline in health services and the increase in the number of injured, displaced and prisoners (CNN library, 2017).

2.2.10 Libyan universities in the civil war

Unfortunately, pockets of civil war still exist around the country since 2011 and there is a political crisis between Islamist groups and militias including the Muslim Brotherhood and Anssar Isharea, as well as other tribal, regional and Islamist military groups. According to Volkmann, E., (2015), many universities in Libya, such as Omar Al-Mukhtar University in Al Baydha city in eastern Libya have been harmed by the civil war and have been seconded as housing for refugees. For example, Benghazi University is closed because of the fighting in the city. It ‘was forced to halt all teaching’ and the war caused much damage, including to most Internet facilities, laboratories and campus buildings. Therefore, ‘the civil war came at a terrible time for higher education’ (Volkmann, 2015). Moreover, according to the faculty Dean at Azzawya University’s School of Pharmacy “the problem we may face is that teaching staff from Tripoli cannot join us because of the fighting taking place on the road between Azzawya and Tripoli” (Fhelboom, 2014). Sabha University in the south of country is also suspended due to fighting in the city: ‘the students and faculty were repeatedly subject to other crimes such as assault, abduction and humiliation’ and the university has been broken into many times by armed men (Al-Jeheimi, 2015). Also, the University of Sert has been deeply affected by the war because the city was the hometown of Gaddafi and witnessed fire fights and bombing raids during the last days of the Gaddafi regime. From the end of 2011 the city has seen fighting between Islamist ISIS (Daesh) militia groups and other group of militias fighters. According to Al-Warfalli A., (2015), ‘Daesh is an acronym for Islamic State, which has exploited a security vacuum to expand in Libya as it did in Syria and Iraq’. The University of Sert has been deeply affected and attending courses is dangerous because ‘the city has fallen into the hands of the Islamic State of Iraq and Levant (ISIL) fighters which have exploited the chaos and security vacuum in Libya four years after the ousting of the late leader Muammar Gaddafi’ (Reuters, 2015). The war has therefore eroded education and much of the rest of civil society over the past year (Fhelboom, 2014). These circumstances in Libya made

conducting a research difficult and dangerous. There is real danger in the country and, travelling between cites is not safe.

2.3 Developments in media and communications

With regard to media and communications in Libya, this section presents the situation in modern Libya, focusing on the last 20 years of the Gaddafi regime, in order to provide background on the current state of the Libyan media. Media were controlled by Colonel Gaddafi's regime until the fall of Tripoli in August 2011, and Libya had not adopted any media law, so the media environment was under and following Gaddafi's political ideas of Al- Jamahiriya. Thus the 'Libyan media system has been one of the most restricted and government-tied systems in the Arab world' (Richter, 2013, 150). This section discusses media and communications history in Libya with a focus on the press, radio and TV.

2.3.1 Press

The first recorded Libyan media appeared in the middle of the 18th century in the form of a journal called A-Taraggi. Another newspaper called Tarablus Algharb was also published at that time (Martin and Copeland 2003). Subsequently, during the time of Italian colonisation an Italian newspaper called Jaridat Al-Italia Al-Jaridat replaced Tarablus Algharb and contained both Italian and Arabic writing (Mezran, 1994). According to Rugh (2004, 45), the development of the Libyan press was slow due to the low levels of literacy in the country and its lack of any Arab-owned newspaper until independence in 1951. At the time of independence, several newspapers were published by some of the political parties, and after the revolution of September 1969, Libya became a republic and the media was controlled and owned by the government (Ghejam, 1990, 237, Human Rights Watch, 2006).

Therefore, the Libyan press during the time of the Gaddafi regime was owned by the general committee (government), and individuals were not allowed to publish anything in the press (El Issawi, 2013). The Gaddafi ideology and mass media in Libya during his regime led the Libyan press to be different from that of the former USSR. There were three kind of press. The first, exemplified by publications such as Al Zahf Al Akdhar (The Green March) and Al Jamahiriya (The People's Republic) newspapers, was directed by a committee of revolutionaries. Other newspapers, such as Al Faje Aljadeed (The New Dawn), were directed by popular committees. Other magazines were published by universities, the academic press and some other organisations. Additionally, since the end of the 1990s, the media and press in Libya saw some increased freedom with publications such as the *Quryna* and *Oea* newspapers, which were published in August 2007 (Richter, 2013).

2.3.2 Radio

Libya's first radio station appeared at the time of Italian colonisation and was broadcast from Rome to Italian people in Tripoli and Benghazi. However, the first nationwide radio station in Libya was a US

radio station broadcast from the Wheelus American Air Base in Tripoli until 1970 (Elfotaysi, 1996). According to Ghejam (1990), the national radio in Libya started in 1970 under Gaddafi's regime. The number of Libyan radio stations increased from 4 in 1980 to 11 in 2000 and 22 national and local radio stations by the first years of the 21st century (Al-Asfar, 2002, Elfotaysi, 1996).

2.3.3 TV

Libya's first television channel was broadcast in 1956 from the American Army Base at Wheelus in Tripoli. It was originally for the American military on this base, but in 1964 it started broadcasting programming for other audiences for about one hour per day. In 1968 the Libyan government appointed a Minister of Information and Communication who was responsible for the Libyan TV channel that was gradually developed (Gharssalla, 2003, Boyd, 1982). Libyan TV under the Gaddafi regime was controlled by the government (Gharssalla, 2003). Following the launch of the first national Libyan TV station in 1968, directed by the government, Libyan TV experienced significant growth, as did television in other Arab countries (Lynch, 2006, Rugh, 2004). Therefore, with satellite access, Libyan TV underwent significant development and saw a mushrooming of channels as part of a new generation of TV. Companies such as the cable company CHAA among others launched further TV channels on Arab satellite and later on Nile Sat satellite (Gharssalla, 2003). Those channels included Al Libia TV, Al Nadi TV, Al Jamahiria TV, Al Shababiya TV, Al Hidaya TV, Libya Education TV, Al Mutawasit TV and Al Badeel TV. Following the revolution of 17th February 2012, Libya has seen the establishment of new TV channels in Tripoli, Benghazi, Mesurat, Sabha, ElBaida and Zentan, and some others have been launched from outside the country.

2.3.4 New Libyan communications technology

Communications and the Internet were mainly run by the Libyan government through a semi-private telecommunications company called Libya Telecom and Technology (LTT), which controlled Internet use in Libya. It was established in 1999 as a form of government sponsorship of communication technology directed at that time by Gaddafi's son, Mohamed. It started a commercial service in 1998 for mobile phone Internet connection introduced in 1999. The service was improved in 2005 by the introduction of Libya Digital Subscriber Line (DSL) Internet connection services. It also launched a local service in 2007, Code Division Multiple Access (CDMA) for Internet service, and Libya Max in 2009.

In 2010 there were about 1,228,300 fixed broadband subscriptions, 19.33 per 100 inhabitants, and in 2012 this fell to around 814,000, 12.58 per 100 inhabitants (World library (2014, 1). Additionally, Internet connection in Libya has been established through cellular phone service and other telecommunication companies. Also, in the middle of the 1990s mobile phones were launched on the Libyan market with phone subscription at 161.12 in 2014. Due to the civil war there is no further update available for these statistics of subscription after 2014.

Table 2-3: Libya Internet and mobile phone subscriptions (source: The global economy, (2014) Libya Internet and mobile phone subscribers 2012/2014)

Country	Code	year	Internet users	Internet subscribers	Internet subscribers per 100 people	Mobile phone subscribers	Mobile phone subscribers per 100 people
Libya	LY	2012		67300		9.59	155.77
Libya	LY	2013	16.5	64700	1.04	10.24	165.04
Libya	LY	2014	17.76	62800		10.08	161.12
Libya	LY	2015					

2.3.5 The Internet in Libya

The development of communication in Libya was highly controlled under the Gaddafi regime. According to the Libyan Gate Site (2010), Libya suffered from being connected rather late to the Internet due to the international embargo of the 1990s, from the weakness of the communication infrastructure and from the difficulties caused by the country's geography. The Internet was first introduced in Libya in 1998 with only a small number of users, but in 2000 Internet use rapidly increased, such that there were approximately 10,000 users, and the use of the Internet subsequently become far more widespread. The cost of Internet access was quite high, and the service was far from perfect, but recent improvements mean that in 2013 Libya had 1,115,025 users, representing 19.9% of the population (Internet World States, 2013). Moreover, there are several means of Internet connection available: home connections, work departmental connections, cybercafés, university labs and mobile phones. However, Internet connections in Libya remained under government control until the downfall of the Gaddafi regime, although in 2006 Libya was removed from the list of Internet 'enemies' due to a fact-finding visit that discovered no evidence of censorship of Internet use (Reporters without Borders, 2006). Similarly, improvements in the smartphone market are facilitating Internet use everywhere in Libya, which now increasingly depends on mobile phone connections. Regarding to Internet world states (2018) until 2017, there were 2,800,000 Internet users in Libya that is 43.7% of the Libyan population.

Table 2-4: Libyan Internet users ((Internet world states (2018), Libyans Internet Users Statistics)

LIBYA
LY - 6,408,742 population (2017) - Country Area: 1,777,060 sq km
Capital city: Tripoli - population 1,126,648 (2015)
2,800,000 Internet users as of March, 2017, 43.7% of the population, per IWS.
2,800,000 Facebook users on June/2016, 43.7% penetration rate.
Local Time and Weather in Tripoli, Libya

Libyanna

Libyanna is a mobile phone company established in 2004 and owned by the General Posts and Telecommunications Company (GPTC). It was directed by Mohammad Gaddafi, the oldest of Gaddafi's sons. In 2005 it improved the Internet service to GSM 2.5, in 2006 it launched the third generation General Packet Radio Service (GPRS), along with High Speed Downlink Packet Access (HSDPA) technology and this was further improved in 2009 by the Libya Max connection. The company is now owned by the government-controlled Libya Post Telecommunication and Information Company (LPTIC), which is also owned by the Elmadar Company. Both together reached 10 million subscribers. Following the civil war, part of the Libyanna Company was separated to create a rebel-owned cellular network called Free Libya (Coker, 2011).

Elmadar

Elmadar is a national Libyan mobile operator established in 1997 and also owned by the GPTC. It is a national Libyan mobile operator run by highly industry-skilled and loyal personnel. Its mission is to keep customers connected to their loved ones and to business, educational institutions and social, cultural and entertainment services. It has improved its Internet connection service to Global System for Mobiles (GSM) 2.5, and General Packet Radio Service (GPRS) Internet technology service, and it launched the Elmadar third generation factory. In 2009 it signed a deal to develop its Internet service into the Elmadar Aljadid providing a fourth-generation service (Aburkhiss and Aref, 2012). At the end of 2013 El-Madar Aljadid was reached by 4,841,749 users and had developed services for Internet connection.

2.3.6 Internet at the time of Libyan civil war

It has been argued that the Internet played an important role during the civil war in Libya, young users used computers, laptops, and mobile phones to be active online during the escalating events. They found it easy, safe, and vital out of government control. This played an important role especially at the start of demonstration for an exchange of ideas, opinions, photos, and videos and helped to transmit local news to the international media. According to Scott-Railton (2013, 46), the international news picked up what young Libyans published such as videos, and twitters on social media and these being circulations online. He noted that the Facebook page called 17 February played an important role from the start of the revolution 'Facebook was used extensively during the revolution, with both real-life and electronic groups and individuals creating a dramatic volume of pages in support of the uprising' (48). Moreover, foreign international correspondents were able to enter the besieged parts in some cities in the East of Libya and the city of Misurata; they helped protesters to be online by bringing connection technologies (47).

Bomberowitz (2011) noted that day after day Facebook pages were being raised in Libyan social media; one of those pages reached 21,500 likes with plenty of participants posting their comments on the recent events. Also, pictures and videos were being posted that contributed to the dissemination of

developments in Libya by the international media. Twitter covered the Libyan revolution and some Twitter pages were being reached day after day by followers, these contributed to showing Libyan uprising and daily war details that gave the international media, followers and news agencies opportunity to support protesters. Furthermore, YouTube played an important role during the Libyan revolution, according to Bomberowitz, (2011) 'the YouTube platform has plenty of footage from all over the world (including throughout Libya) to get a full perspective of what is occurring and how it all unfolds'.

In fact, the Internet connection in Libya witnessed weakness due to government control whereas rebels in the East of Libya have managed to outwit government moves to sever the region's communications (Hill, 2011). It played the role of allowing international media, and movements and other countries' international fans to follow the Libyan uprising. Also, it helped to build online society at the time that the Libyan government could not control or suppress online demonstrations. This was a new society where the government could not play a part or take any role; it is a new development of society (Mahroom 2011).

2.4 Chapter summary

This chapter has discussed Libya's geography, history, economy, political framework, population, and education system and media and communications environment. Media and communications in Libya were also described: first old media such as radio, TV, newspaper, and then the Internet, including its definition, history, user growth and the new Internet of social media. This description focused on the circumstances of the last fourteen years, which were dominated by the political ideology of the Gaddafi regime, which influenced the ownership structure of the media, which was under the control of the government and therefore suffered from monitoring and censorship. Nonetheless, connections gradually developed and Libyan users have been able to go online step by step, which may play a role in the events of the Arab Spring.

The next chapter gave details about the study's literature review including: framework theories and previous studies. It would present theories to explain study aim, objective, results and discussion, and also previous studies presented background of the Internet use and role in society.

Chapter 3: Literature review chapter

3.1 Introduction

This chapter discusses literature review in nine steps; it starts by reviewing the idea of the information age and the network society and discusses the development of and the reaction to modern communications technology, including the idea of the digital divide. This is followed by review and discusses previous studies about the measurement of Internet use in developing countries.

It then examines the uses and gratifications model as a tool for understanding elements of media use in this new networked society. This approach provides a basis for understanding the motivations that underlie new media activities and forms of interactivity. It discusses online interactivity and social media in perspective of online gratification. This is followed by the discussion of agenda setting perspective including online behaviour, agenda setting levels, and the role of media, especially social media. For more illustration, the chapter discusses social change theories in perspective of new communication technologies. This focuses on the role of the Internet particularly social media and social change. It discusses communication and second society focusing on new Arab society.

The chapter also discusses previous studies about the role of online interactivity in social change starting with a wide review of international studies, then Arab studies and focusing on Libyan studies. The studies have measured Internet use, especially by young people and university students, focusing on gender, areas (rural and urban) and understanding networking in the time of communications technologies. This focuses on online interactivity, the role of the Internet, social media and public opinion, online interactivity during the Arab spring and the new media generation and the Arab spring opening closed regime.

3.2 Information age

The idea of the information age has arisen in the last three decades from academic discussions of the economic developments derived from new communication technologies. The term "information age" has been used by many authors to describe the process of the world developing towards becoming a "global village" and to introduce the idea of globalisation in everyday life (Albrow, 1996, Fuller, 1996, Melucci, 1996, Garon, 1999, Webster, 2005, Castells, 2010, 2011, Devriendt et al., 2011). In most cases the term is used to indicate the rise of a global age based on the everyday use of new communication technologies in society and the formation of a 'network society'.

3.2.1 Communication and network society

Most authors have defined the network society as a contemporary society that is in part built on the electronic networks of contemporary information and communication technologies. Major media

authors have debated the nature of this society over the last decades, most of whom understood the rise of network society in terms of the 'global village' proposed by Marshall McLuhan (1964, p, 63). It can be argued that information theory and mass communication theory (e.g. Shannon, Weaver, Innis and McLuhan) developed as a function of, or reaction to, the development of modern communication technologies (Robinson, 1996, pp, 157-168). Therefore, the social scientific study of communication meant a focus on 'who says what in which channel to whom with what effects', setting the stage for a tradition of media effects research (Lasswell, 1948, p, 37). Furthermore, Lasswell, (1948, 1972) concentrated on the interactions between mass communication and social action, as did Wilbur Schramm (1955, p.4). This tradition marks the start of the idea of the "information society" – and some of the earliest examples of the concept can be found in work from the 1970s.

3.2.2 Wired society

In 1977 James Martin used the term the 'wired society' (p, 3) to describe the concept of a network society that fitted the new technologies of the time. He used the term 'wired society' to indicate a society that is connected by mass communication networks. In describing society in this way, he in part predicted the nature of the Internet and the meaning of network society in the 21st century in his books 'The Computerised Society' (1970) and 'The Wired Society' (1977). These books were aimed at a general readership, rather than computer professionals; he noted that information networks were likely to be used by everybody by the 2000s. Moreover, he foresaw that these new forms of communication would have a number of consequences for the organisation of work, social relations, education, political life, the environment and so on which led him to sketch a portrait of an idyllic society:

> Imagine a city ten or twenty years in the future, with parks and flowers and lakes, where the air is crystal clear, and most cars are kept in large parking lots on the outskirts. The city has cabling under the streets and new forms of radio that provide all manner of communication facilities. The television sets, which can pick up many more channels than today's television, can also be used in conjunction with small keyboards to provide a multitude of communication services. (Martin, 1999, p, 255)

Furthermore, he noted that the information transmission and processing abilities of the new technologies had the capacity to gradually change the key elements of societies such as major cities, as well as towns in deeply rural districts. However, the fast-paced development of technology led writers like Martin to focus their attention on the immense possibilities of technology rather than its actual uses. It appears that the terms global village, cable city and information society were therefore used to identify *potential* transformations of the economic system into a globalised system with its own social, cultural and political consequences. In Martin's work the information highway becomes a

metaphor for societal change. His work also tries to make the global fit into local societies and to understand the activity of high technology away from cities and in more traditional communities:

> Many country villages have a satellite antenna. People can have their own garden or farmstead and can walk in the fields and woods; they eat fresh vegetables and bread from the local bakery; but they are no longer cut off from the world.... There is a growing trend to small communities which are self-dependent except for their use of the new telecommunications highways. (Martin, 1978, pp, 8-12)

3.2.3 Network society

The term ‘network society’ was defined by Van Dijk (1991) in his book *The Network Society*, and it is the key idea in the first part of Castells (2011) trilogy *The Information Age.* Castells argued that modern society is not just defined by technology, but also by cultural, economic and political factors that build the network. Furthermore, Castells (2007, pp, 29) argued that 'Societies are passing from the industrial age into the information age' (see also 2000a and 2000b). Castells argued that Western societies remain capitalist but that the new means by which they act has changed from energy (coal and oil) to information. He added that these new communication technologies enable globalisation and rapid digital communication, changing the nature of time. For Castells, moreover, information is of central importance in determining economic productivity, and, by allowing for the disintegration of space, communication technologies have engendered globalisation. Castells did not argue that networks are a new form of social organisation; rather he argued that they have become 'key features of social morphology' (2000a, p, 5). This is because communication technologies such as the Internet allow for the decentralisation of operations and the focusing of control, increasing the effectiveness of networks relative to hierarchical structures. Of businesses he wrote that ‘The main shift can be characterised as the shift from vertical bureaucracies to the horizontal corporation’ (2000b, p, 176).

Therefore, Castells also emphasised the fact that power now rests in networks: ‘the logic of the network is more powerful than the powers of the network’ (1996, p, 193). For example, networks of financial capital are global in scale. He also claimed that networks exist between businesses, where the organisational unit has shifted from being capability-oriented towards being project-oriented. Resources including consultants, employees and other businesses are brought together to work on a particular project, then reallocated and dispersed when the task is completed (Castells, 2000a, p, 12, cited in Nyíri, 2004, p, 23).

The capacity of an actor is in the network, whether a government, individual, company or other organisation, is determined by the degree to which that node can contribute to the aim of the network as a whole. Here this new environment requires skilled flexible workers: ‘in the organisation men give way to the flexible women’ (p, 12). This leads to a multiple process of exclusion and inclusion from

the network. The men and women who are most disadvantaged are those who, with nothing to offer the network, are excluded (Castells, 2000a, p12).

3.2.4 Information and communication and the network society

Information is in the heart of network society, but for Castells the network society is a step beyond the information society that has been formed by the convergence of three independent processes:

- The IT (information technology) revolution which enabled the existence of the network society.
- Restructuring of capitalism in the 1980s.
- Cultural social movements of the 60's that led to the 70's repercussions such as feminist movements (Castells, 1997, p, 7).

Therefore, the information technology revolution is a necessary but not sufficient condition for the formation of the network society. Bolter (1991) supports this position in his seminal book on the computer, hypertext and the history of writing, in which he concluded that 'the computer is an ideal writing space for our networked society' (p, 238). From another side, Castells (2007) noted the bizarre trend of the differential diffusion of information technologies in developing poor countries or areas 'where there is no electricity but there is some form of courage and mobile charges of mobile batteries in the form of merchant bicycles' (p,9).

Furthermore, Van Dijk defined the idea of the network society as a form of society that organises its relationships around media networks, gradually replacing or complementing social networks of face-to-face communication. Thus, digital technology replaces personal communication, which means that the prime modes of organisation and the most important structures of modern society are shaped by social and media networks (Van Dijk, 2012). Van Dijk's analysis of network society was 'academic and muted, in contrast to Joy's crie de coeur upon realising the potentially radical implications of technological progress' (Duchastel, 2000, pp, 327-328). Van Dijk also developed Castell's analysis of the Soviet Union as a mode of production which was not suited to the network society and information, an analysis which he thinks may also explain the failure of the Pacific region to rise further. Castell's idea of a Fourth World, according to Van Dijk, was part of the Third World in Africa, South America and Asia, where development has stagnated, and the poorest part of the developed world, which together form an underclass (Van Dijk, 1999, p, 128). Van Dijk also emphasised the idea that technology users and citizens were not directly part of the world economy, but rather were immersed in multimedia. The networked society is therefore more cultural, merging shows, education, news and single programmes into the same processes of knowledge in the minds of users and consumers (Van Dijk, 1999, p, 133).

3.2.5 Network and new type of society

With new communication technologies in the era of the information age there is a new type of society. According to Van Dijk, (1999a, p, 23) this network society is a new type of society that is gradually taking over from the mass society that emerged from the industrial revolution and expanded in the twentieth century. He emphasised the fact that the achievement of our needs, such as the reception of a variety of information and interaction, passes through the network, which provides all the needs that are fundamental to human choices (cited in Duchastel, 2000). This means that interpersonal and other mass communication forms and organisations will come together. People are perpetually becoming more linked to one another, and they will continue to have more opportunities to access information and communication (Van Dijk, 1999).

Thus, analysis of the characteristics of network society in the time of the information age and global village focus on the processes of life features. Therefore, authors emphasised the social, economic, cultural and political consequences of the development of network interactivity that resulted from new communication technologies. Furthermore, in the 21st century, the Internet is gradually becoming one of the main media for culture, politics and economics and is used by large sections of society. Communication has always occupied a vital place in the lives of societies, always playing a central role as a status indicator relative to socio-informational structures and the action of social actors. These new media are a new type of communication and have therefore led to the appearance of a 'new type of society, (Van Dijk, 1999a, p, 23) that has developed through the exchange of information. Additionally, in this new type of society the main features and processes of the network society may all interact to create specific social forms, which include an informational and global economy, social polarisation and social exclusion, a culture of reality and virtuality and the politics and space of the flow of information. These forms have developed within the ambit of global interaction and interactivity. The idea of a 'new' society as a result of the role of Internet use is more broadly explored in the context of a second society and the idea of new Arab societies in section 3.8

3.2.6 Division and inequality in network society

The notion of the digital divide is related to the rise of the information age and distribution on new communication technologies. According to Sukkar (2004), the digital divide is a result of advances in information and communication technologies in the last two decades, especially the Internet, which have created 'global telecommunication networks' (p, 27). Also, 'it measured statistically Internet ratio-user numbers regarding population, personal computers, Web sites, and telephone lines' (Sukkar, 2004, p, 27). Gorski (2003) noted that historically the notion of the digital divide referred to a lack of physical access to information technologies. Similarly, Castells (2002, p, 248) defined the digital divide as 'inequality of access to the Internet' and defined by Van Dijk, (2006, p, 178) as 'the gap between those who do and do not have access to computers and the Internet'. The digital divide is also related to the difference between those people who have access to knowledge and those who do

not as well as to differences in levels of ICT in terms of access, usage and applications between people and countries (Sukkar, 2004, p, 27). Ragnedda and Muschert (2013, p, 1) defined 'the digital divide as the unequal access and utility of Internet communications technologies and explores how it has the potential to replicate existing social inequalities, as well as create new forms of stratification'. They argued that age, gender, income and education should be used as demographic and socio-economic factors to understand how the Internet is accessed and used.

3.2.7 Type of digital divide

Four barriers to access were noted as creating the digital divide by Van Dijk and Hacker (2003, pp, 315-316):

- A lack of meaningful usage opportunities, which they called 'usage accesses'.
- A lack of digital skills, which they called 'skill accesses'.
- A lack of elementary digital experience, which they called 'mental accesses'.
- A lack of network connections, computers and other communication technologies, which they called 'material accesses'.

Van Dijk (2006) argued that developed countries are closing the digital divide in terms of material accesses. In terms of skill access and usage access, Van Dijk noted that the digital divide remains deep and wide. In terms of information skills, he explained that these skills include select, research and network sources and the processing of information in computers. Strategy skills include the capacity to use these resources as a tool for the general and particular aims of a developing society. Skill access is divided between the populations of developing and also developed societies (Van Dijk, 2006, p, 181). In terms of usage access, Van Dijk (2006, p, 182) noted that databases, bookkeeping and presentation applications are more of interest to people who have a high level of education, whereas people with low levels of education and income prefer simple usages such as games, entertainment and simple consultations. Van Dijk and Hacker, (2003) illustrated that material and mental access might not be enough to mitigate low levels of usage and skill access.

Norris (2011) described the digital divide as a multidimensional phenomenon, and she distinguished between a democratic divide, a social divide and a digital global divide. She further subcategorised the digital divide to include the following dimensions:

- 'global divided is divergence of Internet access between industrialized and developed societies,
- Social divided is gap between information rich and poor in each nation,
- Democratic divided is difference between those who do, and do not, use the opportunities of digital resources to engage, mobilize and participate in public life'. (Norris, 2001, p, 4)

Castells (2002) claimed that there are five digital divides: an age gap, a family/single gap, an ability/disability gap, an education gap and an ethnical gap. Wilson (2006), in contrast, outlined:

> [E]ight digital divide aspects including; (1) financial access (cost of ICT services relative to annual income), (2) physical access (access to ICT devices), (3) content access (availability of relevant applications and information online), (4) design access (usability), (5) cognitive access (ICT skills), (6) political access (access to the governing institutions where the rules of the game are written), (7) production access (capacity to produce one's own content), and (8) institutional access (availability of institutions that enable access). Wilson (2006, pp, 303)

Therefore, Lei et al., (2008) noted that there are two main different ways of dealing with the digital divide. On the one hand, some researchers see the digital divide as a natural phenomenon, and they therefore suggest that no intervention to bridge it is needed, because it will self-correct as ICT develops. On the other hand, some researchers have proposed interventions (Lei et al., 2008). Therefore, the digital divide is a problem which has socio-economic and geographic dimensions (Yuguchi, 2008). Many types of digital divide can be identified such as that between different national, local, global or regional levels. The digital divide is a dynamic problem because new communication technologies are still emerging and being developed day by day in both developing and developed countries.

3.2.8 Gender and the digital divide

This thesis acknowledges that there have been and continue to be important inequalities in relation to gender and technology use in all areas of the world. These differences are dynamic and complex. Ranging from distinct gender-based inequalities in access to very specific differences in use in contexts of ubiquitous access. These vary greatly between contexts of use, nations and cultures. Use is of course highly dependent on a complex mix of online and offline factors related to culture, class, resources and the specific constructions of gender in context. For example, Hargittai (2010) noted that women have lower intensity of and narrower range of online activities. Others such as Haight, Quan-Haase, & Corbett (2014), argue that disparities continue to exist in forms of digital engagement and that gender gaps exist in self-perceptions of online skills and abilities (Hargittai & Shaw, 2015). In the context of this project the focus on gender is not in regard to inequality or disparities per se. Rather the thesis explores how similarities and differences in gender variations talk to questions of change in regard to local cultural and contextual aspects of gender. Early Arabic literature and commentary focused on the 'dangers' of the Internet in regard to traditional gender roles (Hamdi, M., 2010; Al-Khauja, M., 2000; Aibraheem, A., 2008). Prior descriptions of, and generalised lay understandings of 'traditional' Arab culture within the West and within the region might predict notable gender differences in access and use. In section 3.2.3 Elsafty, M., (2005) discussed gender inequality in the Arab world. The impact of the Internet on these traditional roles is discussed in section 3.2.8 (Aibraheem, 2008); in section 3.2.9 (Ibrahem, N., 2008); in section 3.8.1 (Figueroa, M. E., et al.,

2002) and in section 3.9.6 (Philip, N., 2011). This work points to a more nuanced position. As a starting point this thesis asks the empirical question of whether the broad aspects of use, gratifications and attitudes to the Internet are comparable between young Libyan men and women at university. Detailing the general use and attitude similarities and differences provide an empirical basis for following studies to explore the more detailed and specific variations highlighted in more recent Western research. The primary goal of this thesis is not therefore to focus on gender inequalities but to consider gender differences and similarities in Internet use between young Libyan students in contrast to both prior expectations and as markers of change in aspects of social and cultural expectations.

3.3 Measuring Internet use in developing countries

This section discusses previous studies to provide a background and frame the case about the use of the Internet with a focus on the Arab world, especially Libya. Moreover, it discusses studies about the digital divide in the Arab region, the Internet and social evaluation and mobile phone Internet use in Arab societies, with attention to gender and geography. It gives a background to Internet use in Libya that includes university students and area of residence.

3.3.1 The Internet and developing countries

Sonaike, (2004) considered the role of the Internet and other issues of development in Africa. He discussed the situation of new communications technologies in Africa and the challenge it faces and considered the north-south technology gap that is known as the global digital divide. Sonaike noted that, starting in the late 1990s, the Internet and the telecommunications revolution have helped to close the gap between first and third world countries. Many African countries are now facing the new challenge of addressing disparities in access to and usage of telephones, personal computers and the Internet across demographic groups within the same country and between countries. Furthermore, as this trend of development continues, 'the Internet has the potential to narrow the gap between rich western nations and poor nations' (Sonaike, 2004, p, 43). There are some factors that affect development related to new communications technologies, for instance, there are poor families who do not own a computer and do not have the income to afford one. These factors clearly affect personal and national development because they limit people's opportunities to access the Internet at home. Also, the level of education and the ability to read and write are further obstacles: most developing countries face the widespread problem of illiteracy. However, Sonaike (2004) argued that these obstacles are gradually becoming less significant as the digital divide shrinks due to the spread of technologies, which are becoming more and more available to poor people and thus enabling them to join the global communications and knowledge society. He noted that there are steps which have been taken regarding network connection and the development of new skills which may improve the

distribution of these new forms of telecommunication. This can be seen in the growth and distribution of Internet connections in African countries:

> Up to 1993 only four countries in Africa were connected to the Internet, by August 1997, 44 countries were on the Internet, a 10-fold increase in four short years. By September 2000 according to the African Information Society Initiative (AISI) online database, all 54 African countries were providing Internet access. (Sonaike, 2004, p, 46)

Regarding Internet use in Africa, including Libya, Sonaike noted that there is a strong correlation between the availability of telephone lines and Internet density since most Internet connections currently occur via the telephone. This structure creates access and gives people more opportunity to connect to the Internet. Additionally, he addressed the moral issue facing many developing countries that have to decide between investing heavily in information and communication technology and providing basic food and shelter for their population. Sonaike (2004, p, 51) argued that investment in ICT today is an investment for tomorrow because the nation will be able to harness the benefits of ICT, such as access to the global market, education, medical information and a means of monitoring governments to ensure the protection of human rights, and to improve standards of living.

The study focused on digital divide between the first and second world and measured the spread of the Internet in Africa, however it would have been better if the study focused also on the digital divide in African society by studying gender and area categories. Also, the change in society shows new communication technologies happening in first world countries and not in African countries.

3.3.2 The Internet and the Arab world

The Silatech Index (2011), in partnership with the Gallup Centre, studied the 'Voices of Young Arabs' in three areas: mind-set, access and policy. This review focused especially on information and communication access, in the home, by cellular phone access or using other devices. They investigated young people aged 15-29 in the countries that are members of the League of Arab States. The report classified 20 Arab countries into three income classes: high income countries - Qatar and the United Arab Emirates; middle income countries – Tunisia, Jordan, Morocco, Syria, Algeria, Iraq, Egypt, Lebanon and Libya; and low-income countries – Djibouti, Somaliland, Sudan, Mauritania, Yemen, Palestine and Comoros.

In 2010 the report noted 87% of young Arabs across the Arab League had cellular phone access, up from 79% in 2009, and both domestic and community Internet access had also increased from 59% in 2009 to 62% in 2010 (see table: 3-1). Cellular phone access by young Arabs increased more than any other indicator in the Silatech Index tracks. 69% had Internet access in their communities in 2010, compared with 63% in 2009.

Table 3-1: Young Arab access to information and communication technology (The Silatech Index, 2011):

Young Arabs' Access to Information and Communication Technology

Among young Arabs aged 15 to 29

	2009	2010	Difference (pct. pts.)
Cellular phone access at home	79%	87%	+8
Internet access in community	59%	62%	+3
Internet access at home	19%	22%	+3

Surveys conducted in 20 Arab League countries and Somaliland between February and December 2010.
The Silatech Index: Voices of Young Arabs

GALLUP

For Internet connection, the report noted that 62% of young Arabs had access to the Internet in their communities in 2010, and that young people in middle-income countries were more connected than in 2009 (see the table below).

Table 3-2: Young Arabs' Internet access (The Silatech Index, 2011)

Young Arabs' Internet Access

Among young Arabs, by income group

	Home Internet access in 2009	Home Internet access in 2010	Community Internet access in 2009	Community Internet access in 2010
High-income countries	69%	71%	93%	86%
Middle-income countries	18%	22%	63%	69%
Low-income countries	7%	9%	39%	33%

Surveys conducted in 20 Arab League countries and Somaliland between February and December 2010.
The Silatech Index: Voices of Young Arabs

GALLUP

The report noted that there was a 2% increase in Internet access at home between 2009 and 2010, and similar increases were seen in Internet access in the community. Moreover, the report noted that young Arabs believed that the Internet allows them access to a wide variety of information and that cellular phone and Internet access increase young Arabs exposure to job opportunities in their societies. The table below shows the increase in cellular phone access, which was + 9 in low income countries, + 8 in middle income countries and -1 in high income countries.

Table 3-3: Young Arabs' cellular phone access (The Silatech Index, 2011)

Young Arabs' Cellular Phone Access

Among young Arabs aged 15 to 29, by income group

	Cellular phone access in 2009	Cellular phone access in 2010	Difference (pct. pts.)
High-income countries	99%	98%	-1
Middle-income countries	79%	87%	+8
Low-income countries	72%	81%	+9

Surveys conducted in 20 Arab League countries and Somaliland between February and December 2010.

The Silatech Index: Voices of Young Arabs

GALLUP

This study showed the increase in cell phone access in low- and middle-income countries and spread of Internet use in Arab countries and giving important evidence of the crucial increase in Internet access in these countries, which supports the study objective of measuring Internet use and increased use of new communications technologies such as computers and cellular phones. The increased ease of access to the Internet by phone in middle-income countries and more specifically for poor people should also be noted.

3.3.3 Arab society and issues of equality

Elsafty, M., (2005) studied the right of education, employment, political participation, marriage and gender inequality before the law in Arab countries. She noted that the last fifty years have seen significantly rising rate of female literacy and the expansion of education in Arab society as the proportion of females in primary and secondary school has more than doubled, especially in Gulf countries, where the oil boom has led to the launch of programmes of development. However, there are still gender discrepancies in Arab countries and the literacy rate is still higher among females. Elsafty focused on Gulf countries which have oil economies, where the literacy gap appeared to be smaller. Importantly, she emphasised that 'gross enrolment in education does not reflect any variation between the sexes in Qatar and the Libyan Arab Jamahiriya, as represented by 75 and 92 respectively for both sexes' and added that this gap between the genders is not particularly wide in most Arab countries, with the exception of Yemen (Elsafty, M., 2005). Moreover, female enrolment is higher than male enrolment in some countries like Bahrain, Kuwait, Lebanon and Jordan.

On the other hand, Elsafty noted that there are as high a percentage of females as males in the early stages of education in Egypt and Syria but that fewer women continued their education to a higher level. Education in Arab countries follows socio-cultural lines: men are prepared to be breadwinners and their education is considered necessary in order to get a job, whereas women are prepared to be housewives and degrees are therefore considered luxuries. Elsafty, M., (2005) noted that Arab women fall on the wrong side of the digital divide and are more 'distanced from information and

communication technology (ICT) than the men who are already part of digital divide when global comparisons are made'. She, however, noted that in some countries women are emerging very strongly in public life, especially in Kuwait, where they have achieved high levels of education. In general, though, women in Arab countries have significantly lower levels of political participation because the public sphere is considered to be a male domain.

She emphasised that the divide in the Arab region is based on its culture and its attitude towards female employment and going out, which has developed from a traditional heritage that emphasises female seclusion, although this tradition has been spuriously tied to religious dogma.

Many of the Arab countries that follow Sharia (Islamic) law and some of them have codified a Law of Personal Status based on their own view of Islam part such as 'Malikia, Shafiea' Hanblia' Shiea ...' and the explanation of 'Sharia' which is called 'Fiqh'. This 'Jurisprudence (Fiqh) is concerned only with practical judgments, which men/women exercise to bring closer to God' (Jouredan, 2013). Elsafty argued that in these societies, the systems are mostly biased to the advantage of men:

> The problem here is, therefore, not the absence of a legal base for women's rights; nor is it because Islam places them in a position inferior to men and discriminates against them. The real problem lies with a traditional heritage that creates a gender-based unequal situation. (Elsafty, M., 2005)

She was careful to emphasise that gender inequality in the Arab world is highly varied: 'the degree of inequality among women varies from one Arab country to another, at the same time that the kind of inequality may likewise reflect variation' (Elsafty, M., 2005). Importantly she argued that there is confusion between traditional and religious requirements and that culture heritage permeates all aspects of society. She added that, in general, 'the impact of the global currents affects the result of this struggle, leading it to a more liberal direction' (Elsafty, M., 2005). However, this study would benefit if she went through elements which helped women to narrow down gap comparison of men, the investigation of these elements would develop results of the study and explain more reasons of inequality. These could be the age, means of communication and area of living such as rural and urban areas.

3.3.4 The digital divide in the Arab region:

Ali (2014) studied information society and the digital divide in Arab countries to investigate the digital divide between Arab society and that of developing countries and understand the rate of the development of the information age in Arab countries. He noted that the info-Arab state went through two stages. The first is the rate of information flow (Info-density), which signals to capital and power of workers in the communication technologies in both quantitative and qualitative value. Second is use of information (Info-use) which signals the rate of use of communication technologies (ICT). Ali (2014, 370) emphasised that no Arab countries had achieved a high level of information citation, he

also noted that digital divide according to the Arab State Information System appeared in Arab Countries by Maturity Level of Information Status. It noted that no Arab country was able to enter the first classification, while in the second classification or high level of maturity (151-300 degrees) come Qatar, Bahrain, and the UAE. The intermediate level 'hypothetical' where (Kuwait, Saudi Arabia, Lebanon, and Jordan) and at the moderate level (Oman, Tunisia, Egypt, Syria, Algeria and Morocco) and countries noted in low level (Somalia, Sudan, Yemen and Mauritania) (pp. 369 -370). Ali's study focused to investigate digital divide between Arab countries and went through income level of countries rather than focus on population rate, literacy, and gender differences. For example, the high difference of the population between Egypt and Qatar led to high difference in people's literacy as the population in the education system in Egypt would be greater than the population in Qatar.

Ali (2014, p, 370) pointed out that the 'rate of development of new communication technologies (ICT) is the way to measure digital divide in Arab countries', and he noted that this is a real measure which appeared in the rate of Arab countries (2002-2007-2008). The UEA has jumped from the level 40th in 2002 to the 32nd in 2007 and then to the 29th in 2008; Bahrain jumped from the 38th in 2002 to the 33rd in 2008, as did Qatar and Saudi Arabia; but Kuwait and other Arab countries decreased their level of classification in developing information citation. The UAE had the most developed communications technologies and Comoros the least. Libya was ranked the 78th in 2002 and in 2007 ranked 81st, but ranked to 78th again in 2008.

For the sub-indices of the development of new communication technologies, Ali noted that rate of Internet use in Jordan increased by 200%, and Qatar had one of the 20th most economic dynamics in the world with a rate of 203% between 2003 and 2007. Bahrain's development rose to be 190%, UAR 178% (2008). For the same period, Oman 121%, and in the rate of use of the Internet Saudi Arabia was ranked 14th by development of 33%, Kuwait ranked 20th by 31%, but in the level of Internet service. For the Arab countries, the development of the use of new communications technologies was highest for the Gulf countries and lowest for Sudan, Yemen, Mauritania, Somalia and Comoros.

He noted six types of digital divide in Arab world: first, regarding the rate of information citation in Arab countries; second, regarding control and monitoring; third, the cost of communication technologies; fourth, Arab text Internet content divides; fifth, regarding e-government readiness; and sixth, in terms of the level of awareness of the developing information society. Furthermore, he emphasised that the digital divide is narrowing year by year, although there are still aspects of the digital divide that need work, such as the information economy divide and Internet economic use divide, as well as divides for culture, education and health service use (Ali, 2014, p, 287).

Ali (2014, 354) used two methods to estimate digital divide. First: the Lorenz method as it was used by the Information Economy Knowledge Report 2009 for measuring the digital divide in Internet use among the world population in a comprehensive survey of 154 countries with a population of 80% of the world population in three periods (2000-2005-2008). It is a simple and limited method used to

measure the digital divide because it measures the gap between only two variables. When the gap is zero, the relationship is linear and is oriented straight (at 45 degrees) and then called 'Lack of gap'. The 2009 Knowledge Economy Report used this method to measure the digital divide in Internet use among the world's population in a survey of 154 countries with 80% of the world's population in three (2000-2005 -2008). The horizontal axis represents the ratio of population and vertical axis to the percentage of Internet service subscribers. The first graph of the bottom shows the percentage of Internet penetration in 2000 (at 80%), which reached 14%. The curve was more severe, indicating that the gap is large, while in 2005 it increased to 35%. To 50% as shown in the third curve, the curve appeared more rigid, and when the proportion of Internet users 80% will apply the curve with the straight line and lack of gap. Second: Gini coefficient method: This method is used in most sources to measure the digital divide between States and geographical groups. It is a scale of (0-10), zero is low divide while ten is the absolute limit.

Regarding the aim of this study, both methods were appropriate as the Lorenz method measured the gap between two variables and the Gini method was used to measure between states and geographic variables. From another side, it is not clear how he measured digital divide in information society of the Arab world because it is not only between states or geographical groups; it is also part of social classes.

3.3.5 Network and social evolution in Arab society

With the advent of new communications technologies, people have new opportunities to digitally connect and communicate. El Gamal (2010), provided an account of the inclusive digital society that the Internet might bring about, which he illustrated with some examples of young people's contribution to network society and evidenced with analyses of social media trends observed in Egypt.

El Gamal pointed out that the Internet provides a digital bridge across social divides for the younger generations who had felt alienated as active citizens in countries such as Egypt. He analysed online activities such as blogs, Facebook pages and websites and found that, while people previously had been unable to discuss publicly many controversial social topics, which were "unheard" or limited in their discussions, they were now able to discuss them on the Internet. He also noted that the use of new communication technologies offered Arab society a new platform for interaction, especially among young people: 'In Egypt and many other parts of the world, youth represent the new age and they represent themselves by the tools of the new age (El Gamal, 2010, 21). Explaining the importance of the new media, especially the Internet, in Arab society, he noted that the development of new media has allowed people to be more connected, especially through social media. Mobile phone Internet connections, as well as the increased use of laptops and tablets, have made it easier for people to interact while on the move. He also noted that such media are now well established among Egyptian users, with some websites and blogs having over half a million visitors for every article. Furthermore, he noted that the new media give people the opportunity to engage in new activities. He

pointed out that the assumptions of the new era and of the new network society address society are of a connected 'world', 'age' or 'society' based on individualism, social fragmentation, independence and freedom (El Gamal, 2010, 25). These are now seen as some of the key features of the digital era and are among the values that are derived from the social influence of the Internet. This rapid increase in the ability of citizens to communicate may therefore shape their lifestyle, capacity and ambitions.

This study noted important results that there is a digital bridge across the social divide for the young generation that compound with our study's examination of the role of the Internet in society. Whereas, investigating society by categories comparison, such as education level and area of living, would present more details.

3.3.6 Arab mobile and Internet connections

Zuehlke (2012) found that in Arab countries, mobile Internet and social media are dominant, but disparities in access remain. He noted that Arab countries have rapidly developed Internet access via mobile phones, but still lag behind the developed world in terms of access to fixed broadband Internet at home.

Zuehlke noted that increases in the speed of the mobile 3G network led to larger numbers of users accessing the Internet via wireless networking on computers and mobile phones. He found that the Internet was used regularly by 30% of the population in the Arab region at the end of 2011, compared to 13% in sub-Sahara Africa, 27% in the Asia/Pacific region, 56% in the Americas and 74% in Europe. Internet access via mobile has expanded rapidly in the Arab region in recent years. The number of mobile phone subscriptions tripled from 2006 to 2011 from 125 million to 350 million, a rate of increase of 19 points higher than the world average. There are now 97 phones per 100 people in the region.

Zuehlke noted that online connection has spread through the mobile 3G network and through wireless networking. Libya is nearly in the same level as The Gulf Cooperation Council.

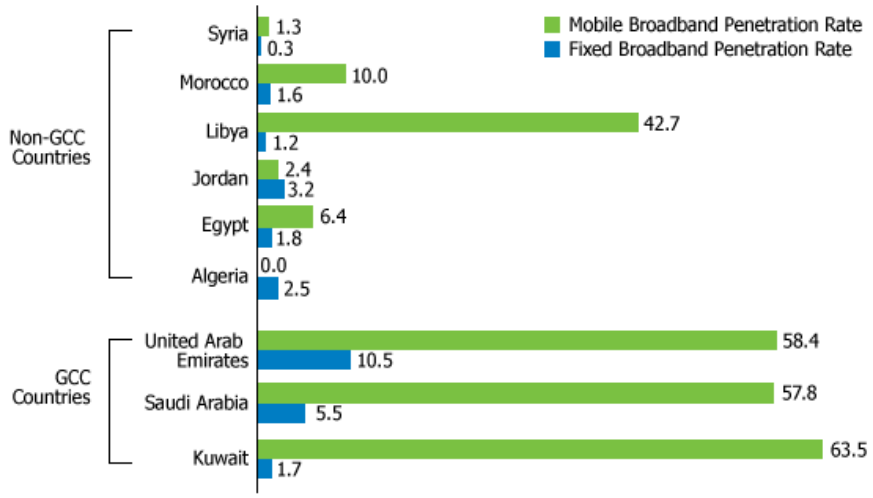
(GCC) countries in mobile broadband penetration, with a rate of 43 per 100 people, 'due to heavy government support to compensate for a lack of fixed broadband and the fact that Libya is an oil-rich country with GNI per capita of $16,400' (Zuehlke, 2012).

Libya also has one of the highest rates of increase in mobile phone Internet connection in the Arab region. Zuehlke noted a strong link between income and level of access to the Internet communication technologies, even though countries such as Egypt, Morocco and Tunisia have made progress and now have high levels of ICT use. The amount of Arab Internet content is increasing through online portals and smartphone mobile apps; participatory and interactive content, particularly sharing services and online forums, is most popular. Zuehlke found that Google, Facebook and YouTube were among the most visited sites in every Arab country, and the 10 most visited sites also included Twitter and BlogSpot. Zuehlke, (2012) recommended that access to high speed broadband be improved

because this could further increase Internet use and create jobs. From another side he noted that the ITU recommending low price for digital service might improve ICT literacy. This study showed the Libyan rate of mobile phone Internet use and kind of Internet use on the web. It would be more beneficial if study investigated this by categories to make results richer and give a wider picture. Also, it is important to categorize countries by population, geographic or income as this helps to have more details.

Table 3-4: Fixed and mobile broadband Internet subscription rate, per 100 people, selected Arab countries 2010 (Source: International Telecommunications' Union, ICT Adoption and prospective in the Arab region 2012 (Geneva: Zuehlke, 2012).

Fixed and Mobile Broadband Internet Subscription Rate, Selected Arab Countries, 2010



(per 100 people)

Source: International Telecommunications Union, *ICT Adoption and Prospects in the Arab Region 2012* (Geneva: ITU, 2012).

3.3.7 Rural Arab society and young people's use of the Internet

The geographic location of Internet users has the potential to affect both their general living conditions and their ability to access new communications technologies. This is especially the case when comparing rural and urban areas, and is true in Western as well as Arab societies, with access to broadband being much lower in rural UK than in its major cities. This issue was investigated by Rabea (2006), who explored the rate of Internet use and its consequent psychological and social influences in Egypt.

His questionnaire survey sample was 120 university students aged 19 to 21, comprised of 60 men and 60 women. Rabea (2006, p.9) found that 83% of the rural youth used the Internet, as did 66% of women. Furthermore, the majority of them used the Internet socially, using email and chatting with online friends.

This study focused on the Internet's psychological effects such as social confusion, personality complexes and personal confidence. Users were gratified by entertainment, personal emails, chatting with friends and gaining new information. Women used the Internet for social reasons more than men, who used it more for job hunting and other needs:

"بلغت نسبة استتخدام الانترنت من شباب الريف المصري 83.2% ,حيث بلغت نسبة الاناث 66.6% وتأتي والعلاقات الشخصية, والايميل والمحادثة مع الاصدقاء والزملاء على الانترنت مواضيع الاستخدام في التسلية, حيث اظهرت الدراسة ان الذكور يعتقدون انهم معزولين بدون الانترنت, وانهم ايضا يستخدمون النت من اجل الحصول على عمل, بينما الاناث يستخدمن الانترنت من اجل الحصول على علاقات خاصة" (p.6)

'83.2% of rural Egyptian young people use the Internet and 66.6% of women use the Internet. They use it for social friendships, entertainment, personal relationships and emails. The majority of men feel isolated without the Internet, and they go online to find a job, whereas females use the Internet to have relationships (Rabea, 2006, p.6, translated by the author).

Rabea discussed how rural young people use the Internet to satisfy their social needs; she also noted that men use the Internet because they feel lonely and to find jobs.

The study shows that a high percentage of university student Internet users in rural areas were interested in being online, but it did not define how motivation was measured and it offered no comparison between genders or between users who resided in urban and rural areas. Also, if rural dwellers are using the Internet more and more, as Rabea found, it seems likely that this will affect traditional rural Arab society as it has already affected urban centres. The study gave importance to note in relation to the Internet use by university students, education level and area of living that measure society categories. Whereas, more investigation would make the study richer if it's also about owning computers or mobile phones for Internet connection. Alghalban (2007) also studied rural areas and university students' use of the Internet by surveying university students in Tanta, a rural area in Egypt. 50% of the sample was from the Social Sciences and the rest were from scientific disciplines. The study focused on use, motivation, obstacles to use and variables that may affect the use of the Internet.

Alghalban found that 75% of students used the Internet, of whom 66% were men. They used the Internet for email, chatting with friends and colleagues and studying. 40% used a home connection and 35.5% used a connection in Internet cafés:

من طلاب وطالبات الجامعة يستخدمون الانترنت,66% من المبحوثين هم من الذكور حيث اظهرت 75% الدراسة ان نواع الاستخدام بالترتيب كان عبر الايميل, والتحادث مع الاصدقاء والزملاء ومن اجل اسباب دراسية, ويلاحظ ان اماكن دخول الانترنت 40% في البيت بينما 35.5% يستخدمون مقاهي الانترنت

75% of university students are using the Internet; however, 66% of them were men. They use it for email, chatting with friends, and for their study. Moreover, 40% of them are using home

connection and 35.5% are using cybercafé connection. (Alghalban, 2007, p.9, translation by the author)

This study noted that the Internet is becoming of greater interest to students' personal and social lives. However, Alghalban pointed out that many departments, libraries and laboratories in universities-controlled Internet access, which made students, feel more uncomfortable about their Internet use. Furthermore, Internet connection in university was not free, and students considered this one of the obstacles that decreased the time they spent online (Alghalban, 2007, p.10).

Alghalban's study also indicates that young rural people are interested in being online and might have more motivation to do so because their local towns and villages may lack local entertainment. This adds to the role of the Internet as a new route to a world of browsing in the global village. This study is important as it gave a picture about rural area use of the Internet where users could narrow down the gap of the digital divide between areas. However, the kind of connection is important to be investigated for more information about the spread of Internet connection at home and family support of being online.

3.3.8 Internet use: gender and location differences

The majority of young people aged between 18 and 25 are studying at university and therefore have more opportunity to access and use the Internet for their studies and for other purposes. Aibraheem, A., (2008) aimed to discover gender differences in Libyan students' Internet use by conducting a questionnaire survey of 112 men and 116 women students at the same level of study in both scientific and literary disciplines. He found that men connected to the Internet more than women because of the social conditions that make men more "free" than women. He also noted that 100% of science students and 88% of literary students use the Internet.

يكون استخدام الانترنت عند الذكور اكثر من الاناث, وذلك ربما لأسباب اجتماعية تتعلق بحرية الذكور اكثر من الاناث, وامتلاكهم لحواسيب, كما يلاحظ ان طلاب التخصصات العلمية يستخدمون الانترنت بنسة تساوي 100% بينما التخصصات الادبية فبنسبة 88%, وهو ما يعني وجود علاقة وثيقة بين .التخصص العلمي واستخدام الانترنت

Because of traditional Arab culture, men use the Internet more than women due to their greater social freedom which is based on traditional culture. Also, 100% of students of science use the Internet compared with 88% of human science students. Thus, there might appear to be a relationship between study domain and Internet use. (Aibraheem, 2008, p.16, translated by the author)

Women were more focused than men on using the Internet to study. Aibraheem explained this was because men have more time to connect than women, who do not have the same level of freedom to go out at any time. Furthermore, he found that men were more interested and spent more time than women in using the Internet for "fun" activities. Aibraheem explained these results as a negative

effect of the Internet on students who were less focused on their studies, which may have been reflected in their educational attainment. This result of negative effect suffers from lack of adequate method to measure as it is influenced by society traditional culture rather than proper method. Moreover, he argued that using the Internet did not have the positive impact of studying, and instead supported having fun, chatting and sharing multiple kinds of information on topics such as culture and politics. The study used value of negative and positive without any definition of these values.

The Arab countries have a larger proportion of young people in their populations than many Western societies, and there is evidence that they also constitute the majority of Internet users. Shen and Shakir (2012) studied Internet usage among Arab adolescents. Their preliminary findings come from research conducted during the 2008 semester in two universities in the UAE. One was a public university with gender segregation and the other a private university with no gender segregation. The authors aimed to explore the limitations, if any, of young university students' use of online resources. They also aimed to discover how Internet resources affected how the students perceived themselves.

They found that using the Internet had become routine for students, with 86% accessing the Internet daily, while the rest accessed it 3-6 times per week. 73% had 6-10 years of experience using the Internet, 20% had 2-3 years of experience and the rest have used the Internet for more than 10 years (Shen and Shakir, 2012, 3). They also found that the top five most frequent Internet uses were emails (51%), search (24%) and chat (13.68%). This shows that students use the Internet mainly to seek out, form social connections and for fun (Shen and Shakir, 2012, p.4).

Shen and Shakir (2012, p.4) argued that 'The Internet has become a major information source for respondents in facilitating studies, getting news on the Arabic world and Islamic culture, updating on stock markets and sports news' (4). Emails on servers such as Hotmail, Yahoo, and Gmail were found to be an important alternative means of communication. Google Talk and the online messenger MSN were found to be the students' most frequent activities. In addition, the authors concluded that the Internet offers Arab women an alternative channel with which to extend their social network.

As regards the limitation and difficulties in Internet usage, on the one hand, Shen and Shakir noted that women felt that they had greater difficulty than men in using the Internet because of a lack of knowledge and language skills, even though over 90% felt that the Internet was easy to use. They felt that, because they lived in a conservative society, they should not access websites that were against their religious culture. Furthermore, the respondents had government limitations of their Internet use, with a few students expressing their frustration with such censorship because they thought that useful sites had been blocked for political reasons. Shen and Shakir (2012, p, 5) also emphasised that the Internet could affect young people's self-perceptions: 'The analysis of the data shows a significant change in the self-perception for these young students. Self-perception before Internet use was dominated by negative adjectives such as "less knowledgeable"'.

The importance of this study is that it shows the reach of the Internet into the Arab world, especially amongst young Arab people. It notes how the use of the Internet has had an impact on the development of young people's identity. Five main activities (searching, e-mailing, chatting, entertainment and online discussion) account for 75% of Internet usage according to time spent. However, the study would benefit if it focused on Internet non-segregation as it breaks down boundaries between genders, therefore this could be social development due to new communication technologies.

3.3.9 Preview of Internet use by area in Libya

Focusing specifically on Libya, Ibrahem, M., (2008) examined the development of an Internet society in Libya. She focused on the social effects of the Internet and addressed questions about the properties of the Internet community in Libya. These included considering media uses and gratifications and social effects that were apparent in the community. She conducted face-to-face interviews and survey questionnaires in Azzawya as an example of a rural centre and Tripoli as an example of an urban centre in the spring of 2008.

He noted that the majority of Internet users were young people and that more than 50% of them were university students:

"أظهرت الدراسة ان اكثر من نصف افراد العينة هم من الطلبة الجامعيين وان

معظمهم يستخدم الانترنت . "

> Study noted that more than half of respondents were university student and the majority of them are using the Internet. (Ibrahem, M., 2008, p.43, translated by the author).

One key element of Ibrahem's results is that young rural people are more interested in being online than are urban youth. 47.4% of this group said that they made new relationships on the Internet and 71.4% felt that this kind of relationship was more powerful than face-to-face relationships. Daily Internet use was 3.62 hours on average, mostly spent on email, chatting, using messenger and searching for new information. These activities helped users to know how to use computers, build websites, learn English, and form their own political views on world news. The majority of users were young people and university students aged around 21 years. Half of those were members of Internet groups that they claimed gave them satisfaction and fulfilled their needs. Additionally, 57% of those surveyed had very close Internet relationships and 39% of them stated that they gained educational satisfaction through their Internet use (Ibrahem, 2008, p, 44).

Ibrahem did not find any significant differences between the two areas, although she noted that women's night time Internet use was likely to be higher in Tripoli as an inner-city area than in Al-Azzawya, a rural area.

The importance of this study is that it focused on the Internet society in Libya, on comparisons between urban and rural areas and on the gender of young users. It also showed other aspects of time use and motivation. However, it avoided discussing some important elements such as obstacles to being online and the political aspects of Internet society. Ibrahem used quantitative and qualitative methods which were appropriate for this kind of study. But he should have been more careful about study society for appropriate percentage to be able to achieve the ethical rate of samples. This is important to be sure and it could then generalize results.

3.3.10 Preview of use of the Internet by Libyan university students

Libyan young people aged between 18 and 30 are often university students (UNESCO, 2013), this means that they are members of university student society and they are in the high education level. Research by Abo-Harara (2010), into trends in university students' use of the Internet sought to discover rates of use and gender differences, general trends and specialisations. The study samples were 69 men and 111 women who were studying in the humanities and science, with survey questionnaires conducted in 2010 in Azzawya University.

According to Abo-Harara, men in the university are more interested in being online and using the Internet than women, with 88% of men compared to 51% of women. He noted that users have high positive feelings about the effect of the Internet on society, especially men, who felt more positive than women. 82% of science studies students and 73% expressed positive feelings about going online. Abo-Harara also emphasised that the social culture of Libyan life may lead women to be more careful in expressing their feelings about the Internet:

> تمت ملاحظة ان الذكور يرون الانترنت اكثر ايجابية من الاناث, وهو تمايز بين الجنسين, بينما التخصص يحدث فرق في معدل التردد على الانترنت حيث ان طلاب التخصصات العلمية اكثر استخداما للانترنت من طلاب التخصصات الادبية
>
> It noticed that men have more positive feeling about the Internet than women, and there is more difference in going online between science students than human science students. (Abo-Harara, 2010, 13, translated by the author)

He also noted that the technical means of connection was a significant difference between men and women's online use. This is because men have more freedom to go outside the house and visit Internet cafés more often than women and more generally because Libyan culture allows men more freedom than women. Abo-Harara (2010, 14) emphasised that young people in Libya are now more interested in being online, and they consider the Internet one of their daily activities as part of their social lives.

This study gives some background on Internet use in Libya in 2010 and on young people's views of the Internet, but, as with other studies conducted by Libyan researchers, it avoids asking deeper questions about the development of society through the new communication technologies, which

could be about kind of connection, obstacles and difficulties of being online. The study tried to discover everyday features of Internet use such as for cultural and social purposes without analysing how these activities might affect wider society that is important and showed wide results.

3.4 Uses and Gratifications

Applying the uses and gratifications theory to media has been of vital importance in previous and contemporary mass communication research. Infante, Rancer and Womack, (1997) noted that use and gratification has been used in communication theories in an attempt to explain how individuals use mass media to satisfy their needs (Leenheer, 2008). The application and scope of this theory covers the needs of users, receivers and adopters of both old and new media content. Historically, uses and gratifications theory was first developed as part of research into the effectiveness of the medium of radio in the 1940s (Ko et al., 2005, 57-70). Its explanations focused on audience members, associated behaviours and motivations. The term 'gratification' was introduced by Herzog (1944) to portray the specific dimensions of usage satisfaction of a radio audience (Katz et al., 1973, 509). Thus, the uses and gratifications approach was prevalent from the late 1950s until the 1970s, when television replaced radio as the most popular form of mass media. TV programmes in turn can be related to multiple human needs, such as escape, companionship, information acquisition, emotional release, value reinforcement and reality exploration. Also, Rubin (1994, p.60, p.98-105) notes that Katz (1960, p.346-365) introduced additional ideas to the uses and gratifications theory by considering the benefits of media use. This is also noted in Gurevitch and Haas (1973), who emphasised that mass media is a means by which individuals connect with or disconnect themselves from other people, meaning that the audience bend the media to their needs far more readily than the media overpower them (Katz et al., 1973, pp.509-523), and users have alternative choices to satisfy and fulfil their needs. Katz et al. (1974, pp.15-17) indicated five basic assumptions that underpinned their framework for understanding the correlation between media and audiences. First, audiences are conceived as active, not merely passive receivers of information. Second, there is motivation for a mass communication process to link audience members' needs and gratifications with media choice. Third, there is competition between media and other resources to meet the gratifications and needs which mass communication seeks to serve. Fourth, data supplied by individual audience members themselves drives many of the uses of mass media. Last, if the audience's orientations are explored on their own terms, this might suspend the cultural significance of any values produced by mass communication. These authors therefore argue for seven elements that are necessary to conduct an analysis of uses and gratifications:

> (1) the social and the psychological origins of (2) needs which generate (3) expectations of (4) the mass media or other sources which lead to (5) differential exposure (or engaging in other activities), resulting in (6) need gratification and (7) other consequences, perhaps mostly unintended ones. (Katz et al., 1974b, 20)

Blumler and Katz (1974) noted that different users can use the same message for different motivations, gratifications and needs. Eighmey and McCord (1998, pp.49-187) noted that use and gratification research is important for understanding consumer motivation and relating it to the use of multiple media such as television, radio and new media. The audience might be aware of their motivation and gratification in using different media. These motivations and gratifications include the social situation and the individual's background, such as experience, interests and education. These variables affect people's ideas about what they want from media and which media best meet their needs. Four main needs are identified in the model developed by MacQuail, Blumler and Brown (1972, p.34): '(1) Diversion: escape from routine or problems; emotional release; (2) Personal relationships: companionship; social utility; (3) Personal identity: self-reference; reality exploration; value reinforces; and (4) Surveillance (forms of information seeking)'.

However, McQuail (2001, pp.64-66) indicated that there are new categories for which people use the media, including personal relationships, personal identity and surveillance. Bela et al. (2001) noted that there are three key objectives of uses and gratifications theory: what people do with media, their underlying motives for using media and the consequences of that use. Also, uses and gratifications could explain and establish users' interactivity with the media as potentially leading to particular impacts. Users' motivations still guide their media behaviour and can be divided into two types of need: cognitive and effective (McGuire, 1974). These can be subdivided into sixteen different types of motivation and thirty-five needs (McGuire, 1974). However, Katz and Gurevitch (1973) adopted only five categories:

> 'Cognitive needs, including acquiring information, knowledge and understanding; Affective needs, including emotion, pleasure, feelings; Personal integrative needs, including credibility, stability, status; Social integrative needs, including interacting with family and friends, and Tension release needs, including escape and diversion'. (Katz and Gurevitch, 1973, p.35)

Moreover, other dimension can be added, including general habits of media use; possible applications of benefits acquired in other areas of experience and social activities; expectations and beliefs about the benefits offered by the media, which might shape specific media consumption choices; and habits of general media use McQuail (1983, p.235).

3.4.1 Use and gratification in the time of new media

Given the rise of the network society with its social, cultural and political features, and especially the rise of interpersonal and interactive media, how can the uses and gratifications theory, developed in a mass media age, be applied? Sundar and Limperos (2013) pointed out that new technologies lead to new measurements of gratification which can obfuscate users' ability to understand new gratifications. Modern media offers tools which have expanded user needs, which have been shaped by media technologies, giving rise to new and distinctive gratifications' (1). Therefore, online

environments define the social network within which users present themselves by creating profiles, personal connections and links with other users (Boyd and Ellison, 2007, and Donath and Boyd, 2004). Thus, uses and gratifications theory can be applied to improve our understanding of both uses and behaviour (Eighmey and McCord, 1998, p.187-94, Korgaonkar and Wolin, 1999, pp.53-68). Additionally, according to Cheung et al. (2011, pp.1337-1343), 'use and gratification theory is useful framework for understanding the need and motivation for individuals to use new media'. Also, Coursaris et al. (2013) pointed out that use and gratification theory can be used to examine the perceived characteristics of social media.

3.4.2 The Internet

The new media often create new gratifications and new motivations among various audiences (Angleman, 2000). Ruggiero (2000) noted that the uses and gratifications theory has been widely used, and also is appropriate for the study of Internet use. According to Sundar and Limperos (2013, p.508), new gratifications emerge with new technologies as the world moves from old to new media. In the Internet environment, users are more actively engaged communication participants than they are to other traditional media. Some surveys have shown that users have little trouble verbalising their needs when using the Internet (Piirto, 1993, Ryan, 1995, Lillie 1997, Eighmey and McCord 1998, p.187-194, Nortey, 1998). The available media choices compete to satisfy individual needs (Katz et al., 1974). Moreover, there exists competition not only between the Internet and other traditional media, but between each option on the Internet itself. Users' purposes and gratifications all need to be identified and satisfied:

> [M]otivations for Internet use might vary via individuals, situations, and media vehicles, the majority of uses and gratifications studies explore them based on most dimensions including: relaxation, companionship, habit, passing time, entertainment, social interaction, information/surveillance, arousal, and escape. (Flavián and Gurrea, 2009, p.164-174)

Lin (1996) noted that Internet use is linked with a series of instrumental and entertainment needs which are directed by gratifications. James et al. (1995, p.30-50) pointed out that 'learning' and 'socialisation' are important motivations for Internet use. Following Papacharissi and Rubin (2000) in associating Internet use with the gratification, more details of the specific gratifications offered by Facebook (Raacke and Bonds-Raacke, 2008), Twitter (Liu, Cheung and Lee, 2010), YouTube (Haridakis and Hansen, 2009), video games (Lucas and Sherry, 2004), and MP3 player (Zeng, 2011) can be found. Ferguson and Perse (2000, p.155-174) found four main motivations for Internet use: entertainment, passing time, relaxation/escape and social information. Eighmey and McCord (1998, p.187-194) identified 'personal involvement' and 'continuing relationships' as new motivational aspects. Online, people are empowered to act, communicate and participate in broader societal and political processes. This might allow people to increase 'their self-esteem, self-efficacy, and political awareness' (Lillie, 1997). Gratifications are changing with the rise of new media, as noted by

Papacharissi and Mendleson (2007), and the World Wide Web has a greater diversity of content than the old media, offering something for everybody. Furthermore, its range of material is available everywhere, in the home, school, library or workplace, and it can be accessed anywhere using new communication technologies. Newhagen et al. (1996) noted that use and gratification theory may be useful for examining the mutability of the web, although new media and interactivity are only part of use and gratification theory as it is applied to the Internet, as defined by Heeter (1989) and noted by Ruggiero (2000):

> Interactivity as a multidimensional concept: amount of choice provided to users, amount of effort a user must exert to access information, how actively responsive a medium is to users, potential to monitor system use degree to which users can add information to the system that a mass undifferentiated audience can access, and degree to which a media system facilitates interpersonal communication between specific users. (p.15)

For example, there is now integral gratification obtained from the iPad, tablet devices and mobile phones, (Kim, Sundar and Park, 2011). Johnson (2008) noted some other features that can be identified as new kinds of gratification such as photos sharing on Facebook or other social media. However, Singer (1998, p.20) argued that the Internet is the ultimate form of individualism: it has the ability to satisfy individual needs for information, or for whatever else the user wants or creates. December (1996) applied uses and gratifications theory to argue that there are three broad reasons why people use the Internet: communication, interaction and information. Lin (2001, pp.19-38) suggested that online services should be fashioned to satisfy people's needs for useful information and for social interaction. Moreover, Kaye (1998, p.34) noted that a study of students' World Wide Web usage found that reasons for using the Internet fell into five categories: information, social interaction, passing the time, escape and web site preference. The Internet allows users an anonymity that motivates them to speak more freely than they would in real life (Ryan, 1995). Also, electronic democracy, which Dunleavy and Weir (1998, p.72) called 'open-book government', could have a use and gratification application because it might form a significant part of a new era of political use and gratification (Ruggiero, 2000, p.21). Finally, Kuehn (1994) focused on the interactive capability of the Internet such as discussion groups, e-mail, direct ordering, and links to more information.

3.4.3 Criticism of the uses and gratifications theory

The uses and gratifications theory, as one of the main theories in media studies, has been critiqued over the years. McQuail (1994) noted that the uses and gratifications approach has not been successful at predicting or explaining all forms of media use and choice. He also emphasised that the approach seemed to work best for specific types of media where motivation might be more present. Three key criticisms are:

- ‘It is highly individualistic, taking into account only the individual psychological gratification derived from individual media use, thus, the social context of the media might be deleted. This neglected the fact that some media use might have nothing to do with the activity of gratification.
- There might be little attention paid to media content, researchers attending to why people use the media, but less to what meanings they actually get out of their media use.
- The perspective might begin from the view that the media are always functional to the audience and thus might implicitly offer a justification for the way that the media are currently organized’ (McQuail, 1994, cited in CCMS-Infobase, 2003)

The question of interactivity strengthens the core idea of the use and gratifications theory because it implies an active user in term of ‘the degree to which participants in the communication process have control over and can exchange roles in their mutual discourse’ (Williams, Rice and Rogers, 1988, p.10). Despite some important criticisms, the uses and gratifications theory may be appropriate for the Internet because it does focus on individual motivations, interactions and social uses, which are all prominent features of Internet use, especially the case when users do most of their activity online and obtaining their life gratifications through the Internet, leading to a range of social effects of personal online activity.

3.4.4 Gratification obtained and the impact of the Internet

In order to investigate what gratifications may be obtained from Internet use, Louis (2003) studied the 'Impact of Net-generation attributes, the seductive proprieties of the Internet and gratifications obtained from Internet use'. His examination was into the attributes of the Internet generation and their relationship with the Internet; it was based on a sample of teenagers and young adults aged 16-24. People this age participate in youth culture and form a new generation that is more comfortable and familiar with ICTs than their parents.

Louis showed that users were open individuals who used the Internet primarily as a social technology. He also noted that heavy users of the Internet often felt that they had an illusory ability to deal with the world inside the computer while staying online. The significant result of this research is that the attributes of the Net-generation are closely linked to the gratifications obtained from Internet use.

Louis noted that the gratifications obtained from Internet use among the net-generation can be divided into six groups. The first is surveillance: learning about what is going on the world, contributing to a pool of information, reading about local and international news, conducting research, keeping abreast of events, finding out things the users want to and learning about daily life. The second is escape: putting off things that need to be done, forgetting about problems, getting away from pressures and responsibilities, forgetting work and getting away from what users are doing. The third is affection: users feel involved with what is going on with other people, show others encouragement, let others

know they care about their feelings, learn about themselves and others, feel close to their family and friends online, stay in touch with them and talk about their problems. The fourth is entertainment: having fun, passing the time, being entertained, relaxing, feeling less tense and being kept company when family and friends are not available. The fifth is social bonding: making friends with the opposite sex online, meeting people, having something to do with others and feeling less lonely. The sixth is social identity: feeling important, impressing people and looking fashionable. Louis (2003) concluded that 'the Internet medium is seen by the Net generation as a social technology, and a diversion tool, a status symbol, and also regarded as a key source for information' (126).

The Net-generation consists of outgoing individuals who look for affection, social bonding and entertainment through their Internet use. It also finds it easier, more comfortable and even more entertaining to reveal its feelings, express its views and care for others online. Also, it seems to be more interested in using the Internet to show affection, feel important or look fashionable. Louis argued that the Internet is regarded as a key source of information by its users. There is an important relationship between the attributes of the Net-generation and the gratification it obtains from the Internet. Louis pointed out that use and gratification theory offers a well-established set of predictors of the cognitive and affective gratification obtained from media use. The study went through deep investigation and defined the Internet affection on young people aged 16 -24 years, however, the six gratification groups would be explained better under categories such as social, cultural and political motivation. This could highlight life interest. Also, gender differences would show any tendency for men and women.

People who use new communications technologies, especially the Internet, may feel several effects from this based on its interactivity, either because it satisfies their gratification or sets their agendas. Hamdi (2010) aimed to understand the positive and negative effects of new communications technologies on Algerian university students by discussing the purpose and motivation of the students' Internet use and the effects of these technologies on social, cultural and religious values.

On the one hand, he noted that 68.69% of the sample group conducted research on the web without any restrictions, and that men were freer than the women. 28.76% of the sample group used the Internet to manage their personal relationships, 26.76% for academic purposes and 20.73% to complete their blogs. He also noted that there is no statistically significant difference between the genders and that both spent an average of more than 2 hours a day on the Internet. Moreover, he stated that the majority of university students, 93.62% of men and 98.55% of women, have a mobile phone, which means that they can access the Internet everywhere.

32.16% of the sample group thought that Internet use had no negative effects, while 17.73% saw it as a means of enriching society's values and as having a positive effect on their academic life. 27.06% of the sample group noted that the Internet played a huge role in presenting other cultures, and 14.03% also noted that they go online to avoid the controls and restrictions of society. 32.06% noted that the

Internet allowed them to fulfil their personal and educational needs and enabled them to enjoy their free time.

The study pointed out that 82.32% of the sample group thought that local society could not prevent the flow of information from the Internet, whereas 17.68% of them thought it could, while 10.93% claimed that the Internet could offer content that could not be supplied by local media.

Finally, Hamdi argued that new communications technologies such as computers, mobile phones and the Internet influence young people's life values, and therefore that young people are now less connected with their traditional societies as they become connected to new social, culture and political values with regard to their clothing styles, education and political opinions.

The study went through aim to measure the negative and positive effect of new communication technologies without any definition; this makes the illustration about a negative effect of the Internet as a traditional culture rather than real results. The local culture in Arab countries allows seeing open communication from a negative angle even it enables people, especially women, to have their own personal freedom such as information and communicating with other people.

3.4.5 Social media use, purposes and gratifications

Ziani et al., (2015) studied uses and gratifications of young Libyan and Bahraini users of Facebook. They surveyed 1470 student respondents including 616 females and 854 males from Bahr and Tripoli universities, all of whom were active on Facebook. The study aimed to understand Libyan and Bahraini students' use of Facebook's service and how they were gratified by it. They noted that 50% of the sample spent a third of their time each day browsing the Internet and 34.7% spent half their time on Facebook. The study noted that 'a high proportion of females were considered more addictive than males in both Bahrain and Tripoli universities' (Ziani et al., 2015). The study noted that the samples from both universities spent one third of their online time surfing the web or on Facebook and they noted that this can be described as an addiction.

Ziani et al., (2015) noted that 71.5% of the respondents used Facebook at home, 20.9% accessed it on their smartphones; even though they were not asked what device they used to go online (Internet use at home includes both computer and smartphone use). 7.6% of the respondents browsed at university. Libyan females were more interested in browsing Facebook at home by 34.8%, compared to 25.2% for Libyan males. In Bahrain this gender disparity was not apparent, with 31% for males and 30.6% for females. 59.4% of Libyan females used a smartphone to browse Facebook compared to 50.9% of males. A similar difference was apparent for Bahraini students, with 62.7% females and 47.8% males reporting that they used Facebook on their smartphones. The study found that 26.8% of the respondents used Facebook to write on other users' walls; the proportion of the respondents engaging in this activity was equal for the Libyan sample, but Bahraini females reported that they did it more than Bahraini males. 18.5% of the respondents reported using Facebook for commenting on their

Facebook friends' pages, 18.1% for group discussions, 15.1% for video talk, 11.1% for chatting and 10.1% for messages.

44.7% of the sample used Facebook to make and keep in touch with friends, 24.8% used it for entertainment and 15.7% to express freely their opinions and beliefs. 14.8% used the site to search for group pages and to express their opinions on these groups. Females in both countries liked to express their opinion on Facebook. Ziany et al., (2015) produced a table that summarised motives for using Facebook:

Table 3-5: Motives of using the Facebook

Table No. 9: Shows the Motives of Using the Facebook Site

Motives for Use	Bahrain University				Tripoli University				Total	
	Males		Females		Males		Females			
	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
entertainment and leisure time	133	26.1	70	19.6	98	26.9	63	26.5	364	24.8
Making new friends and keeping in touch with them	168	32.8	224	62.8	144	34.6	140	58.8	658	44.7
Expressing views ,discussions, and social interaction	98	19.2	42	11.7	77	21.1	14	5.9	231	15.7
Joining important and specialized groups	112	21.9	21	5.9	63	17.4	21	8.8	217	14.8
Total	511	100	357	100	364	100	238	100	1470	100%

They noted the motivation for using Facebook as the following:

- Making new friends and keeping in touch with them, 44.7% in total, although females in both universities were more interested in this motivation than males.
- Entertainment and leisure time, 24.8%; this motivation was just as strong for both Libyan genders, but stronger for Bahraini males than females.
- Expressing views, discussion and social interactions were the primary motivation of 15.7% of the respondents; Libyan males were substantially more motivated by this than Libyan females, and Bahraini males were somewhat more motivated by it than Bahraini females.
- Joining important and specialized groups, 14.8%. Male Libyans were twice as motivated by this factor as Libyan females and Bahraini males four times as motivated as Bahraini females.

The study also noted that 29.5% of the respondents believed that Facebook allowed them to make new friends and 16.7% saw Facebook as having many applications for entertainment and for joining groups and pages. This study is important as it focused on social media, especially Facebook, whereas, the motivation of use of the Internet should have more options and should be categorised as social, cultural and political motivation. This would illustrate clearly the way of using it.

3.4.6 Libyans university students and online gratification

Ziany (2010) investigated Tripoli and Zaitona university students' use of social media. The former is in an inner-city area and the latter in a rural area. He studied sample groups of media students in Tripoli, a city, and El-Zaitona, a rural area, for the purposes of identifying different uses of social media. The study chose random samples of students aged between 18 and 24, and consisted of 229 participants, divided into 90 women and 139 men, 35.7% from Tripoli University and 64.3% from El-Zaitona University.

Ziany noted that 71.5% of the university students use the Internet, 50% of them use Facebook and the majority of them consider themselves heavy users, especially the women in both universities. Moreover, 71.41% of the sample group prefer using Facebook and thought that it provides a good service; 44.7% said it allows them to have new friends and 51.7% use it to express their political opinions.

Ziany noted that Libyan university students use Facebook to form friendships, have fun, express their political opinions and enjoy a range of options for navigating Facebook pages. 36.2% of the sample group was members of a Facebook group which gave them the opportunity to express their political opinions and discuss political, cultural and social issues. With regard to traditional social values, Ziany noted that 25.2% of the respondents see Facebook as harmful to traditional social values, whereas 52.8% did not agree and instead see it as important for the development of society.

Regarding the difference between virtual and real societies, the study emphasised that 25.2% of Libyan university students see Facebook as a virtual substitute for reality and 33.8% find that it complements reality because it allows them to overcome temporal and spatial limitations to share their ideas and opinions. The study also noted that 39.6% of the sample groups feel that the Internet is an adequate substitute to their real social life because of restrictions on their personal and social freedom and political opinions.

The study reached five main conclusions. First, the majority of Libyan university students, including both women and men in both urban and rural areas, consider Facebook important and easy to use. Second, they use it as part of their daily activities such as talking with friends, having fun, studying and expressing their opinions outside of society's control. Third, they created Facebook's groups for political and cultural discussion. Fourth, even though some Libyan university students consider the Internet to be harmful to their society's culture, they still claim that they cannot abandon it because they need it to feel that they are beyond social and political control. Fifth, they claimed that political and social control caused them to go online because they could find more freedom and connect with others' aspect of cultural, political and social life.

The study illustrated spread of use of social media especially by university students; however, kind of connection and means of connection would benefit results to understand more deeply elements related to the aim of the study.

3.5 Interactivity

The relationship between media and audience is explored in most media studies work, and many authors have discussed this issue across multiple disciplines. Media effect theories have discussed interactivity as a means of understanding the behaviour of users, participants and creators as they increasingly make use of the new Internet.

The word "interactivity" comes from the Latin "inter", which means "between two sides", and "activus", which means "practice as a theory". Interactivity, therefore, is practice and active exchange between two sides via a medium of communication. This is now considered to be an important idea that uses the relationship between men and machine as a model for modern communication. The term has been used by academics and researchers since the mid-nineties as awareness of and interest in new communication technologies increased. Steuer (1995) defined interactivity as the extent to which the medium allows the participant to modify the content or form of a mediated environment in real time (cited in Chung, 2007, p.43-61).

McMillan (2002, p.271-291) proposed a four-part model of cyber interactivity with two primary dimensions, the direction of communication and the level of control over the communication process. Moreover, interactivity is 'an expression of the extent that in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions' (Rafaeli, 1988, p.111). In addition, interactivity as a concept has been explained in various disciplines, particularly in the context of communications research, and it involves human communication in various ways. There are two different processes which define interactive communication. The first is human to computer interactivity, which is communication between people and new media, and which emphasises the flow of information and control at the human-computer interface. The second is human to human interactivity, which is communication between people. Its conceptualisation is based on an anthropomorphic definition which detects and reacts to human behaviour such as physical movement, body language or changes in mental states, and is called interactive (Rafaeli, 1988, p.110-134). In fact, any form of interface between the end users/audience and the medium may be considered to be interactive: 'The human computer interaction model might consist of three main components including human, computer, task environment and machine environment (Springer-Verlag, 1995, cited in Murphy and Ginn, 2000, pp.142-158).

There has been some debate over the meaning of the term 'interactivity'. Rafael (1988) noted that the 'contingency view' of interactivity as three levels. First; it can be non-interactive when a message is

not related to previous messages. Second; it is 'reactive' when a message is related only to the immediately previous message. Third; it is 'interactive' when a message is related to a number of previous messages and to the relationship between them (cited in Hawkins, Wiemann and Pingree, 1988, p.110-134). These three levels of interactivity also include 'two-way (non-interactive) communication, reactive (or quasi-interactive) communication, and fully interactive communication' (Rafaeli, 1988, p.119). Such interactivity is assumed to be a natural attribute of interpersonal communication (Rafaeli, 1988). It has more recently been applied to all new media, from two-way cable to the Internet (Morris et al., 1996), and might constitute a key advantage of the new media (Chung, 2007, p.43-61). Van Dijk (1999) characterised the development of mediated interactive communication as a major structural change produced by the communications revolution. It enables the convergence or integration of telecommunications, data communications and mass communications into a single medium. More significantly, interactive communication, especially in the media, is related to the interaction design of new media, which includes human-computer interaction, cyber culture and digital culture. It includes, therefore 'specific cases such as interactive television, interactive narrative, interactive advertising, algorithmic art, videogames, social media, ambient intelligence, virtual reality and augmented reality' (Latchem, Williamson and Henderson-Lancett, 1993). In fact, most interactive computing systems are for some human purpose and interact with human contexts (Dix et al., 2004).

3.5.1 Online interactivity

The term "interactive media" normally refers to products and services on digital computer-based systems that respond to the user's actions by presenting content such as text, graphics, animation, video, audio or games (Bucy, 2004). Therefore, interactivity has been identified as central to new media technologies, and is studied in the context of networked communication, which has broad social implications. According to Rice (1984) and Rogers (1995), interactivity communication requires that the sender and receiver roles be interchangeable. However, the key determinants of interactivity are that of the style of control and of two-way communication. Castells (2007) has pointed out that the variety of social software and tools available today has provoked the development of the interactive communication network. This forms a specific type of interactivity emphasised by Van Dijk, (2006a, 9) who called it 'behavioural interactivity', which he defines as the extent of control that every party in the interaction exercises: 'the digital media which is more interactive than traditional media; they enable a shift in the balance of power to the user and the side of demand' (147). This places the Internet at the centre of users' behaviour as a way of engaging interactivity. It has generated more discussion of this concept and its impact on people's lives.

However, new media has a wide range of interactive media platforms based on a number of technologies which play an important role in increasing this sort of implied interactivity. For example, the digital camera allows the audience to interact with the real person behind the pop star image.

Furthermore, the Internet gives users new features that they can use proactively. As a result, users as creators have the same power of action as was previously held by major mass media organisations. Also, the Internet allows users to be more active in diverse ways such as publishing their opinions, writing, sending messages and publishing photos, allowing them to be participants as well as users. It offers at a low cost the ability to create, publish and share content rapidly with other users around the world. Thus, interactivity features in the behaviour and actions of the users of the Internet. This behaviour on the Internet can be categorised into four types of communication between groups of producers and audiences, following Busis (1999): asynchronous one to one communication such as email; many to many communication; communication of one to few or to many such as chat or chat room; and general communication such as access to information that might involve one to one, one-to-many and many-to-one communication.

3.5.2 Social media and interactivity

The social media employs 'web and mobile-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content' (Kietzmann et al., 2011, p. 241). Interactivity in the time of social media is a process-related variable consisting of information exchanges, and new communication platforms enable interaction and make online participation easier and faster than it is on traditional platforms (Ariel and Avidar, 2015). It is the terminology of 'spreadable media' to describe the social media nature as a platform of active engagement in spreading content (Jenkins, Ford and Green, 2013, p.3). The feature of this new platform of social media offers interactive features: liking, sharing and commenting. New media, through the deployment of new communications technology like iPhones and other smartphones, offer a new sort of interactivity (Meyers, 2011).

3.5.3 Interactivity for gratification

According to Rafaeli (1988), interactivity in a communications setting is associated with the attitudinal dimensions of acceptance and satisfaction and with performance quality, a sense of fun, cognition, learning, openness, frankness and sociability. Beniger (1987, p.352) asked 'when is there human need for interaction?', because interactivity has been shown to lead to more cooperation, and for this reason satisfaction has long been a key element of interactive group work (Hackman, 1990). Satisfaction allows people to use interactive media to make them feel more favourably disposed towards interacting with others. Also, interactive communication can improve their satisfaction with the decision-making process in at least some settings (Applegate et al., 1986). Moreover, Rogers (1988) pointed out that the widespread success of some interactive media is important in producing the critical mass needed to create the possibility that interactive media might facilitate a major change in social life (cited in Dimmick, Kline and Stafford, 2000). Hence, it is important to understand exactly what uses and gratifications are met with by particular interactive media. Additionally, many

authors believe that the uses and gratifications obtained from each interactive media, and the social origins of these uses and gratifications, need to be precisely identified (Katz, Blumler and Gurevitch, 1974, pp.19-32, Morris and Ogan, 1996, pp.39-50).

Within interactivity theory, the mechanism of agenda setting has been identified. Creators, whose media productions may exert great influence on audiences, set agendas in general. The level of agenda setting might lead to further development of those interactive features which the Internet allows. Internet networks make users more like participants than being audience members: users are now also creators who can exert influence. Thus, agenda setting can be used as a tool to understand the influence of the Internet from the sender's point of view, while use and gratification theory can be used as a tool to understand this influence from the perspective of the user. Use and gratification theory, agenda setting theory and interactivity theory might offer a framework for understanding the social change caused by the role of the Internet in users' lives.

3.6 Agenda setting perspective

Historically, as noted by Wahl-Jorgenson and Hanitzsch (2009, p.147), the concept of agenda setting was outlined in the 1920s by Walter Lippmann, who noted that the public reacts to the pictures in their head, not to actual events. Cohen (1963, p.13) predicted that 'The press may not be successful much of the time in telling people what to think about', and McCombs and Shaw (1972, p.176 and 178) noted that 'the mass media exerted a significant influence on what voters considered to be a major issue of the company'. Although the agenda setting function theory has been applied since the 1970s, it is still useful as a means of analysing the influence of communications and the media. McCombs and Shaw (1972, p.176) focused on the effect of mass media communication, pointing out that there is abundant evidence that editors and broadcasters play their important role as they go through their daily tasks of deciding and publishing the news. Moreover, they attempted to explain how and why people think about and rank different social issues, and later they pointed out that the media uses a number of cues to indicate the importance of an issue:

> This impact of the mass media - the ability to affect cognitive change among individuals, to structure their thinking - has been labelled the agenda-setting function of mass communication. In short, the mass media may not be successful in telling us what to think, but they are stunningly successful in telling us what to think about (McCombs, Shaw and Weaver, 1977, p.5).

3.6.1 Agenda setting and behaviour

In fact, the consequence of agenda setting is that the media context can directly influence audience behaviour, as Shaw noted:

> Attitudes and behaviour are usually governed by cognitions – what a person knows, thinks, and believes. Hence, the agenda setting function of the mass media implies a potentially

> massive influence whose full dimensions and consequences have yet to be investigated and appreciated. (Shaw, 1979, p.101)

Gitlin (1980) stated that people found themselves relying on mass media to provide a conceptualised image of the real world. The media agenda may be measured in traditional ways, for example by counting the issues that appear on the front pages of the newspapers or as the main items of the television news. With the growth of a variety of information channels, it makes more sense to understand distribution and consumption through several types of media (Gitlin, 1980, p.1). The media has the power to focus public discussion on special matters, and, while it cannot tell audiences what to think, it can tell them what to think about. Thus, McCombs increased the scope of agenda setting theory to include a phenomenon called 'framing', and argued that, in addition to telling us what to think about, the media can also tell us how to think about a story (Cohen, B. 1963, cited in Maxwell E.; McCombs, (1992).

3.6.2 Agenda setting levels

Agenda setting therefore has two levels. The first level enacts the common subjects that are most important: the media use objects or issues to influence what people should think about. The second level decides what parts of the subject are important: the media focuses on the characteristics of the issues that people should think about. These two levels, therefore, clarify the function of this concept. Rogers and Dearing (1988) divided this process into three parts. First, it identifies the importance of the issues that are going to be discussed in the media. Second, it analyses whether the issue discussed in the media is having an impact on the way the public thinks (referred to as the public agenda). Third, it examines whether the public agenda is having any influence on the policy agenda. This led them to note that 'the media agenda affects the public agenda, and the public agenda affects the policy agenda' (Littlejohn, 2002, p.320).

3.6.3 Agenda setting and role of media

To understand the specifics of users' online behaviours in the context of a more globally marginalised society such as Libya we need to understand individual political media consumption. As potential members of Castell's fourth world, and akin to the former Soviet Union, closed regimes such as Libya are likely to play out the impact of the network society in cultural and political terms. Rather than focusing predominantly on economic aspects, we need to employ models of media consumption that address the social, cultural and political aspects of media use. There are many media effect theories that seek to explain the process by which media messages exert influence. They analyse how the media works in society with participants who are the receivers, audiences and users of media content. Agenda setting is a relevant approach that can explain the role of the media with a focus on creators or senders and on the online interactivity of Internet content. In fact, agenda setting theory can be stretched to cover both sender and receiver when it focuses on interactivity and the gratification of

users' needs. It can be used as a tool to understand and explore evidence for the role of communication in causing social change following the adoption of the Internet. The history of media role research includes agenda setting is an important theory that explains the process of the Internet's role in users' behaviour. The relationship between senders and receivers is the subject of this theory and is used to explain how media role is exerted in different ways and for different reasons. This process of Internet role can work through users' online behaviour as they gratify their needs and interact with content as participants who can read, write, listen, share, publish, express opinions, have new ideas and provide new information.

Most investigations into agenda setting have focused more on political elections. This media role refers mainly to the old media of newspapers, radio and television. The idea of the 'myth of the mirror' explained that the media play key roles in setting creators' political agenda by determining what news to cover, how much to cover it and in what context to do so (Dye, Schubert and Zeigler, 2011, p.109). Couldry et al., (2003), described five functions that drive media role. First, news making: the media determines what will be news. Second, agenda setting: the media select what is covered. Third, interpreting is: the media interprets the news for audiences in a form of a story. Fourth, socialising is: the transmission of social and political values through not only in the news, but also entertainment, sport and advertisements. Fifth, persuading is: the media seeks to influence opinions directly (Couldry et al., 2003). The agenda setting process and criticisms of it inform this thesis's analysis of interactivity on the Internet.

3.6.4 Agenda setting and new media

The main concept that emerges from the theories of new media agenda is gatekeeping. Although the media may exert control over the selection of content presented in the media, the public still cares about the concept of media gatekeeping. This is especially important if the media creator is itself a gatekeeper, as in this case it itself decides what events to report on the grounds of "newsworthiness". Additionally, Wilson et al., (2001, p.14) noted that the media uses gatekeeping and agenda setting to 'control our access to news, information, and entertainment'.

Agenda setting must be placed in the context of new media's interactivity. This means that if the traditional news media influenced how important the public perceived issues to be, Internet users take some control of agenda-setting themselves, using new media to guide and broadcast the important issues that they think need to be discussed. Agenda setting theory, when applied to the Internet, can identify how the Internet influences people's lives, especially those who do not have the freedom to discuss politics. Erbring, Goldenberg and Miller noted that:

> People who do not talk about political issues are more subject to agenda-setting influence because they depend more heavily on media content than those who receive information from

other sources, including their colleagues and friends. (Erbring, Goldenberg and Miller, 1980, pp.16-49)

Furthermore, McCombs (2005) claimed that agenda setting theory considers the Internet as a paradigm to be investigated through and among several types of agenda. In Internet environments it is much easier to identify the direction of influences, and the results may also be very useful for market research (2005, pp.543-557). The development of new media and the Internet has provoked discussion of agenda setting and its relevance, and some have asked whether the Internet might end agenda setting in mass communication. In his research on the agenda-setting role of mass communication, McCombs confirmed that agenda-setting effects do exist on the Internet and clarified some scholars' assumptions that wide access, various sources and the diverse agenda on the Internet will bring about the end of agenda-setting effects. The emergence of the Web has enabled the production and mass circulation of user-generated content. Gan and Beer (2008) stated that:

> ‘This development is accompanied by a new form of interactive culture in which users act at the same time as producers, for they participate in the construction of online spaces while at the same time consuming the content generated by others (98).

Later, with regard to this idea, Gan and Beer emphasised that new media increasingly dominates the world, and noted that agenda setting theory, in order to be functional, needs to draw a clear distinction between media gatekeepers and media consumers, and understand the trend of living in a networked society that is facilitated by the Internet, which allows users to interact with diverse groups and interests and to switch between multiple networks such as work and community networks (Brynin et al., 2006, p.3-22). Thus, social networks provide clues about what people are reading, listening to or watching (agenda setting 1st level) to achieve personal gratification when they interact online, as well as clues about their views on this content (agenda setting 2nd level) (McCombs, Shaw and Weaver, 1997, p.407).

3.6.5 Agenda setting in the time of social media

The advent of Web 2.0 and social media has caused theorists to ask whether traditional media still has the power to set the agenda for the public (Adam and McDonald, 2010). Hunc and Meraz (2009) and Williams and Deli Carpini (2004) noted that multiple scholars have explored this question of power redistribution and examined the influence of blogs in the media cycle and the dissolving of traditional media gatekeepers. Therefore, traditional media have less of a platform than social media; many traditional media outlets cite blogs as a source material, and blogs in turn largely rely on traditional media for information. This reciprocal relationship suggests that mass and social media influence each other such that changes in the media industry are understood as a power struggle (Messner and Distaso, (2008). Social media plays the same role of traditional media and more, for example Twitter becomes an echo-chamber for political news and Facebook has become a platform for information

sharing of every kind. The influence of news media in steering the public agenda has only moved to include new media and social media. Social media participants do not have control of what content they see in their feeds, but they can also choose what content to attend to, see reactions and opinions of other users and see the development of issues on the web. The power of agenda setting lies in its ability to offer and explain important issues, and so old media can still set the agenda by applying meaning to real time events (Adam and McDonald, 2010). Furthermore, agenda setting also can be seen in the social media as influence on user's decision and opinion, Pariser, (2011) with the 'Filter Bubble' theory emphasising how information given from use of social media may be affected by algorithms, effectively isolating them in their own cultural or ideological bubble. This is driven by personalized searches with the algorithms behind websites which guesses what information users would like to see. It is based on their search history and past click-behaviour (Hossain, 2016). This will make users become separated from information that disagrees with their point view, moreover, 'people's opinions might be steered by personalized media' (Borgesius, et al., 2016), while they are not aware of being influenced. However, these choices by these algorithms are not transparent which have an impact on users' information and then step by step in some ways their choice. This phenomenon has been noticed in the U.S. presidential election in 2016 that noted to be affected by the filter bubble of social media such as Facebook and Twitter (El-Bermawy, 2016). Therefore, 'the ability of the news media to penetrate these bubbles and communicate a clear agenda to the public is in question' (J. T. Feezel, 2017, p.3). Moreover, agenda-setting theory can be used as a tool to explain and interpret the role of the media in society and to find evidence of the elements of its role in emergence of a 'new society'. It can discover the perspective of the sender or creator and, in conjunction with interactivity theory and use and gratification theory, develop an understanding of the social change brought about by the influence of the Internet. Internet users, especially on Web 2.0, display common behaviours, which might lead to more interactivity.

3.7 Social change

Various forces interact in complex ways to cause a variety of profound and long-lasting social change examples from the last century that are as diverse as the changes wrought by the world wars, economic and cultural globalisation, climate change, developments in education and communications and political changes such as revolutions. Indeed, it can be argued that society is now changing at a historically unprecedented pace, and many authors have sought to understand how and why these social changes are unfolding.

3.7.1 Definition

Social change is a term that is used to describe change in a social structure. It has been used by many authors in many contexts and is in fact a very broad term that demands further explanation. In sociology it refers to any significant alteration in behavioural patterns and cultural values and may

have a lasting effect on a society's culture. It might also refer to the 'notion of social progress or socio-cultural evolution, the philosophical idea that society moves forward by dialectical or evolutionary means' (Guded, 2014, p.2). It therefore refers to a paradigmatic change in the socio-economic structure. The term is also used to refer to social revolution, such as the socialist revolution of Marxism, or those of other social movements, such as women's suffrage or civil right movements. In general, economic change, culture change, religion change, communication change and scientific or technological forces might drive social change (Inglehart and Welzel, 2005).

3.7.2 Theories of social change

Social change is related to people's behaviour, which can develop in response to several factors. Stresser and Randall (1981) argued that many of the social change theories are concerned with the behaviour of people who are trying to meet their needs. Anthropological authors borrowed from linguistic theories of structuralism to elaborate an approach to social change known as structural functionalist theory. Furthermore, as societies become more complex, increasing differentiation can be shown by the adaptations made, but the basic needs of the people remain constant. Nonetheless, despite interference from external forces, societies constantly seek to preserve or re-establish their social institutions (Strasser and Randall, 1981, p.81).

Therefore, Leat (2005) noted 'three factors including economic, political and culture might effect change in a structure and process. These are fundamental themes of resources, power / politics, and cultural factors that might reappear in a sense and in theories of organisational change'. Three basic categories of social change can be outlined: economic, political and cultural (Giddens and Duneier, 2000). These can in turn be related to social organisations that might be changed and developed; there are four main theories of organisational change:

- First: early modernists see change as planned when a change agent introduces it in a deliberate way.
- Second: in contrast to this, modernists claim that organisational change stems from changes in the environment that are outside the organisation's direct control. More recently, population ecology, organisational life cycle and learning organisation theories have seen organisations as not just adapting to external pressures but as creating their own internal dynamics.
- Third: symbolic interpretive theories of organisational change are essentially dynamic insofar as the processes of social construction are seen as both reproducing existing structures and leading to their alteration.
- Fourth: the postmodern approach explores the paradox of stability and change in organisations. Postmodernist theory sees planned organisational change as rhetoric and change processes as discourse. Thus**,** both theories reject the notion of the organisation as

some sort of definable, discrete entity, and focus instead on organising as an on-going dynamic process (Kezar, 2001, p.147).

Mondal (2015) offered five theories of social change:

1. Evolutionary Theory came to the social sciences from biological evolution and understands culture as undergoing in the change that functions similarly to that observed under general biological laws. There are several variations of this theory: the theory of multilninear evolution, the universal theory of evolution and the multilinear theory of evolution (Mondal, 2015).
2. Cyclical Theory, as developed by Oswald Spengler (1981) and Arnold J. Toynbee (1956), argues that civilizations and societies change following a cycle of rise and decline; just as an individual is born, grows up, matures and dies so do societies' change, grow and also might ultimately fail (Oloruntoba, S., and Falola, T., 2018, p, 110).
3. Economic (Mandan) Theory of Social Change is influenced by Marxism and by economic change theories, which consists of two structures: a super structure which consists of systematic features of society such as religious, political and ideological institutions and infrastructure, which is moulded by these social systems.
4. Conflict Theory: many authors believed that this theory had not considered societies smoothly evolve to the high level; it is a Marxist-based social theory which argues that individuals and groups (social classes) within society interact on the basis of conflict rather than consensus. It sees social life as a competition and focuses on the issue of inequality of distribution of resources, power, and they also believed that conflicting groups in the society might be struggling to ensure it progresses. This theory considered society as an arena of inequality that generates social conflict and social change. Otherwise, Cohen (1968) noted that conflict theory is plausible, but it is not often working (Mondal, 2015). He argued that the structured conflict which involves a fairly equal balance of forces actually obstructs change which might otherwise occur (Adhikari, 2016).
5. Technological Theory refers directly to technologies as tools with specific uses and argues that these technologies might be the important factor in social change by mediating human interactions with nature. The model for technological change follows Marx's idea that societal change can be caused by production. The relationship of technologies to conditions of life and the environment to which we, in turn, adapt is essential (Ogbum, 1947). For example, the invention of the wheel, gunpowder, the airplane, the car, the printing press, the compass, radio, TV, and the telephone have all arguably revolutionised society (Mondal, 2015). Ogbum (1922) noted about 150 changes resulting from the invention of the radio, and with the

contemporary invention of new communications technologies, significant change could be happening in societies in the information age.

Social change is a term used to describe variances or alterations in the social behaviour of a group of people. Theories of individual and group change emphasise behavioural change. Backer (2001, p.46) noted that behaviour is more likely to change if the person forms a strong positive intention, or makes a commitment, to perform the behaviour; if there are no environmental constraints that make it impossible for the behaviour to occur and the person possesses the skills necessary to perform the behaviour; if the person perceives that the advantages of performing the behaviour outweigh the disadvantages; if the person perceives more normative pressure to perform the behaviour than not to perform it; if the person believes that performance of the behaviour is more consistent than inconsistent with his or her self-image or that it does not violate personal standards' image the person's emotional reaction to performing the behaviour is more positive than negative; and if the person perceives that he or she has the ability to perform the behaviour under a number of different circumstances.

Furthermore, communication has an influence on people's behaviour by stimulating their interest and behaviour and by developing their awareness, which is enhanced by communication and stimulates positive change. It is playing a role in 'Changing knowledge attitudes and practices of participant groups, stimulating and facilitating wider social change at the local and national level' (United Nation, 2005, p.22).

3.7.3 The role of new communications technologies in social change

Innovations in digital technology are impressive, and it might be a determinate factor on and facilitator of social change. According to Fraser and Villet (1994), 'the planned use of communication technologies, activities and media gives people powerful tools both to experience change and actually to guide it'. Just as important as the new technologies is the social context within which they are introduced and implemented, because this context determines their usage and impact. 'The digital revolution holds many promises for developing countries, allowing them to leapfrog through stages of development and catch up with more developed countries' (Uimonen, 1997).

These new communication technologies allow for the construction of a global information society or what some authors have described as a stratified world of information-rich and information-poor in which users are able to access the information society. This means that young people who have a high level of education, are computer proficient and have an Internet connection are best qualified to enjoy these new features that might lead to the development of a "new type of society" as noted by Van Dijk, (1999a, p.23) and new Arab society as noted by (Mahroom, 2011).

Nolan (2003) claimed that new technologies can be considered a basis of social change:

> New technologies of material production, as of information processing, send ripples of change through all aspects of social life. The evolution of societies is not predetermined but some general evolutionary patterns can be detected. (18-30).

Miege (1997) criticised Bourdieu's (1989) idea of social life ('L'espace social global') in the world and presented his idea of 'world life ('mondes vecus'), which he explained as the development of the relation between work and production and social movements and private life (Miege, 1997, p.136-137). He claims that all these are influenced by new communication technologies and he noted that these technologies developed the relation between work and production, which is of particular relevance to those interested in social change:

> 'La possibilité de réaliser un tel renouvellement repose sur la prise en considération des éléments suivants: la liaison entre la production et l'action, entre l'organisation du travail et la vie privée transformée par les répercussions des technique d'information et de la communication; la nécessite de situer les actions communicationnelles de acteurs sociaux par rapport à leurs (mondes vécus) et a un espace public d'argumentation, de débat et d'échanges sociaux de plus en plus ensables …' (p. 140).
>
> 'The possibility of bringing about such renewal rests on considering the following aspects: the link between production and activity, between the organisation of work and private life which has been changed by the effects of information and communication technology; the need to place the communication activities of the social actors in relation to their life experiences and to a public place of argument, debate and social exchanges which are more and more stilted' (translated by the author).

Miege here confirmed what Habermas, (1981) described as the communication act ('C'est - a - dire l'agir communicationnel') and tried to renew social action theory, which has undergone significant development in the context of new communications technologies, especially the Internet. In his book 'La société conquise par la communication' (The Society Invaded by Communication), Miege (1997) emphasised the role of new communications technologies in changing economic structures and reorganising economic, social and cultural aspects of society. He discussed this issue in the framework of the individual and the collective, and he noted that new communication technologies have an interdisciplinary influence (137). More specifically, he pointed out that 'Les techniques de communication donnent la possibilite d'activer les changements sociaux', 'communication technologies give the opportunity to activate social change'.

The process of urban social change is described by the conflict model, which sees the city as created from the tensions between the dominant actors' interests and resistance to those interests. Castells (1983, p.302) emphasised that:

> ‘The organisation of social life and the conflict over the assignment of certain goals to certain spatial forms becomes one of the fundamental mechanisms of domination and counter domination in the social structure’ (p. 302)

In fact, global development during the 20th century came about as a result of new communications technologies, and those technologies improved audiences’ and users’ interactivity, such that human kind is at the dawn of a new era, an age of enlightened communication (Stoll, 1996). According to Gray-Felder and Dean (1999, p.4-8), great contributions to the development issue can be made by communication, which plays a role in changing individual behaviours: they advocate ‘using communication processes and media to persuade people to increase their knowledge and change the behaviours and practices that place them at risk’.

Also, Gray-Felder and Dean (1999, p.11) noted that social change is defined as change in people’s lives that they define themselves, for example printing played a huge role in changing the life of people and society from its first use. Historically, radio, television and audio-visual technologies, as well as the explosion in satellite broadcasting, all revolutionised society. Therefore, the emergence of transnational channels such as Arab satellite television, and of the Internet affect politics, the public sphere and the people’s daily lives (Karstens, 2008). Karstens (2008) added that that ‘the Arab and Muslim nations could not help but at the same time create opportunities for the distribution and exchange of news and opinion that did not exist before’. However, with new communication technologies and especially the Internet, Arab society has developed new types of communication and online interactivities, opening it to new information about ideas and life style and allowing it to exchange opinions. This digital communication leads to a digital society which in turn led to improvements that changed people’s lives. In general, these communication tools represent one of the important factors that can provoke social change and development, particularly when people have new ideas and can interact with each other, as well as with other cultures. As a result, people might change the way in which they live, work, do business and interact.

3.7.4 The role of the Internet in social change

The Internet can be adapted to improve education, culture, and health, social and political processes. It is a key resource for information and allows users to read, write, listen, watch, publish, send and receive. However, it is important to note that, there are various different levels of access and use of the Internet within societies, historically most Internet users tended to belong to very narrow social sectors, described as a “virtual elite” (Uimonen, 1997). However, the development of Internet accesses and wider use has reduced, but not removed, these divides. Even within developed nations differences in access due to social class remain (Yates, Lockley, and Kirby, 2015). Within developing nations there remains an empirical question as to what extent access and use has shifted from “elites” to a broader section of the population. The Internet could become a tool for social development if it were applied in a way that addressed the complex challenges of improving the lives of the least

privileged and most needy around the world. If the Internet were socially beneficial, it could be used to alleviate poverty and improve access to health care and education (Madon, 2000, p.85-101). Accordingly, the success of the Internet should be measured less in terms of sheer numbers of connected individuals and more in terms of accessibility and its contribution to social progress. It is important to understand how social change has come about through these communications technologies, particularly when people have access to a wide range of different types of information. This access could gradually enable everyone to benefit from the digital revolution, because information can raise people's awareness. Indeed, it is in universities and research institutes that electronic networks were initially developed and widely used (Botturi et al., 2009).

There is a real possibility there is a relationship between Internet use and social change, especially where people are now more active and have the opportunity to be free to connect with the world and its information culture:

> 'Even if the influence of the mass media is indirect and difficult to monitor, measure, and understand, the media are an important instrument to be used in continuous efforts to improve people's quality of life' (Kraidy, 2002, p.5)

In some ways, the Internet is a gateway to the world of learning, especially to daily personal learning, which helps to enrich individuals and connect them to the collective knowledge of mankind. The Internet as a tool of information culture, agenda setting theory, the theory of interactivity and the functionalism of social change through use and gratification theory can together construct a framework that explains the Internet's influence on people's lives. Individual and collective behaviour can lead gradual or revolutionary change, eventually producing a new kind of society based on the elements of earlier societies and modified during the era of modern society, as is discussed in the next section.

3.7.5 Social media and social change

Groups on social media such as Facebook, Twitter, WhatsApp and others can be used to organise a number of people who identify with similar values or who have common interest or experience' (Sheedy, 2011, p.23). According to Hughes and Palen (2009) users of social media who are members of groups are more likely to become long term users of those social media. Social media group can be a kind of movement because they allow users to share ideas, express opinions and exchange information: 'Facebook fans using their page to do everything from sharing music videos to offering live reports from far-right demonstrations' (Sheedy, 2011, p.5). According to James, J., (2013) such social media usage can lead to social change through eight means: gathering advocates, allowing ideas to develop, forging an authentic voice, creating sustained conversations, being approachable, identifying users' core demographic, developing conversations and allowing users to be innovative in their approach. Therefore, 'social media can be used to effect change in a variety of different ways

from shifting consumer behaviour to increasing an individual's commitment to voting' (Sheedy, 2011, p.5). Moreover, self-efficacy can be increased by using social media to join a cause, according to Brooks (2015, p.27), 'social media usage can have an influence on both external efficiency performance and internal stats'. Social media also allows users to share their perspectives with other people who are far away and who are not close, and therefore allows them to build movements that have wider effects on society; social media is a community building tool that unites the world. In the same way, social media platforms let users dream of better and more efficient ways to construct open government. Participants who use social media to provoke change in society can use it to plan physical and virtual meetings, to keep followers informed about events and news and to gain followers (Sheedy, 2011).

From the other side, there is real criticism for the role of social media in the democracy issue, Pariser, (2011) with the Filter Bubble theory, emphasised how information given from use of social media may be affected by algorithms when users are effectively isolating themselves in their own cultural or ideological bubbles. This is happening by the personalized searches with the algorithm of websites which guesses what information users would like to see. It is based on their search history and past click-behaviour (Hossain, 2016). This will make users become separated from information that disagrees with their point view, moreover, 'people's opinions might be steered by personalized media' (Borgesius, et al., 2016), while they are not aware of being influenced. However, these choices by these algorithms are not transparent which have impact on users' information and then step by step in some ways their choice. This phenomenon has been noticed in the U.S. presidential election in 2016 that noted to be affected by the filter bubble of social media such as Facebook and Twitter (El-Bermawy (2016). Therefore, this may lead to reducing the way of democracy.

3.8 Second society/new society?

New types of society have gradually emerged, according to Michael Crozier (2002, p.10), across the course of the twentieth century to replace the 'mass society'. The term 'second society' was introduced by the Hungarian sociologist, Hankiss (1988), in the context of the closed communist countries in Eastern Europe to refer to the social changes that were happening in these societies and from which a 'second society' might emerge by aiming to:

> [C]ombine systems of foreign organisational principles with one another into a more or less homogeneous cluster, into a separate paradigm, and may organise and imprint with their characteristics a certain section or dimension of social life, as a sphere apart, as a kind of second society opposed to the official first society organised and steered by the dominant socioeconomic factors. (Hankiss, 1988, p.15).

Furthermore, Hankiss based his idea on the relationship between the first and second economy: the second (non-state) economy appeared in the middle of the last century, and is opposed to the first

economy in a series of more or less sharply polarised dichotomies: 'The term second society has naturally been suggested to us by the analogy of the second economy which has been a well-established term in East European economics and sociology for several decades' (17).

The idea then, came from his description of Hungary's society and state economy since the mid-sixties, which had become more open, leading to a greater exchange of information between the two spheres (Hankiss, 1988, p.23). He explained that 'the Second Economy of Hungary' was the sum of economic innovations emanating from outside the state and was not organised or planned by it. It was an invisible economy that produced income that could not be registered by the state. According to Hankiss (1988), this led to the establishment of a second society:

> The second society evolves in practically every area of social life. Alternative, 'foreign system' organisation principles may emerge in economic life as well as in the public sphere, in cultural life, in social consciousness, or in the field of social and political interactions. (Hankiss, 1988, p.22).

He compared the second society to the basic organisational principles of the first society and attempted to identify further organisational principles that govern interactions and processes that do not fit into the normal operation of the first society. He started his presentation of these ideas by noting that at that time in Hungary and other societies 'The interaction and processes in this society are organised and governed by various configurations of organisational principle, and we propose to call these configurations paradigms' (15).

Furthermore, he emphasised that for several decades the term the 'second economy' had been used in Eastern European sociology and economics, which in turn led to the idea of a second society (Hankiss, 1988, p.2). Additionally, he noted that there are two dimensions of social existence governed by two different sets of organisational principles, and that the second society emerged in economic life by adopting an alternative system of foreign organisational principles (Hankiss, 1988, p.22). This was also demonstrated in the 'emergence in cultural life, in the public sphere, in culture, in social consciousness, or in the field of social interaction and principles' (Hankiss, 1988, p.22).

He gave some examples taken from the main areas of social life, including the second economy, the second public life, the second culture, the second social consciousness and the second sphere of socio-political interaction (Hankiss, 1988, p.22-28). These spheres of social and political interaction are complex and consist of modern networks and mechanisms. These kinds of society could include a 'parallel society, second polity, independence society, alternative system…etc.' (Hankiss, 1988, p.28). In order to distinguish between the different criteria evident in the spheres of the first and second society, Hankiss (1988) identified nine discriminating factors based on the role of the economy (p.20-21). He distinguished between the first and second society in Hungary and enhanced his theory by noticing the differences between the two. This distinction between the first and second society does

not consist of two distinct groups of people but between two dimensions of social existence that are governed by two different sets of organisational principles. In addition, Hankiss (1988, p.15) noted that the various configurations of organisational principles form a paradigm that is governed and organised by integration and processes. Thus, the 'second society is governed by a set of organisational and operational principles which is the exact opposites of those of the first society' (Hankiss, 1988, p.20)

3.8.1 Communication and second society

Related to Van Dijk's idea of the network society and new communications technologies is the idea that the network society is a new type of society that is gradually taking over from the mass society that emerged from the Industrial Revolution and expanded during the twentieth century (Van Dijk, 1999a, p.23). This new type of society could be thought of as a second society. Dinnis, de Kool and Johan (2010), in their article on the emergence of intelligent government in the second society, pointed out that social and technological developments and the evolution of the virtual world could be called a 'second society' (p.386). They added that new Internet applications play an important role in this society because they are 'often presented as a revolutionary way of gathering, organising and sharing of information' (Dinnis, de Kool and Johan, 2010, p.1). Moreover, those virtual communication network websites which are used for 'banking, dating, chatting, and sharing interest' are developing and growing gradually in the virtual world (Dinnis, de Kool and Johan, 2010, p.386). The fact that people use the Internet for most of their daily activities has social implications because: 'the second society can be approached on a macro level like a state or global community … we define the possible evolution of the public sector as the second society' (Dinnis, de Kool and Johan, 2010, p.387).

3.8.2 New Arab society

The rise of the notion of a 'new society' in the Arab world was noted by Mahroum (2011). For decades, analysts interested in the Arab world have focused on three groups, namely Western governments, Arab governments and militant groups, and the interplay amongst them. On the margins, a second society has been emerging, one that has gone largely unnoticed, namely the 'Arab Young People's Society'. Mahroum (2011) noted that some developments have played an essential role in the emergence of this second society:

- First: the mushrooming of new universities across the region. This has led to greater access to higher education in the Arab world in the last 20 years, and 'the mushrooming of new universities across the region has created new spaces for youth to meet and mingle'. For example, Libya has seen significant development in higher education and the establishment of universities in urban and rural areas (UNESCO, 2013).

- Secondly, the expansion of non-governmental organisations (NGOs) has increased the number and role of civil societies and helped everyone to engage with different sectors of Arab society.
- Thirdly, information and communication technology (ICT) has quietly developed in these countries as a subspace for networking and the exchange of ideas. This is turn has managed to:

  [O]pen new avenues for pursuing high education, and the Internet allows Arab youths to meet and mingle over Facebook and MySpace… for gossip and rumours about the political class, to share political opinions and non-conformist values, while mobile Internet applications borne primarily over mobile phones, have provided Arab youth with a new space for self-expression. (Mahroum, 2011, p.3)

Mahroum emphasised that these developments have created new spaces for young people to meet, mingle, discuss and have new ideas independent of governments (Mahroum, 2011). Young people see several benefits to being online. The Internet offers a new connection to the world and a new space for association, networking and the exchange of ideas and sentiments. Moreover, cyberspace is also an alternative space for meeting, interacting, exchanging new ideas, training through distance learning at foreign institutions and higher education. These now form an alternative culture and are the most important activities in the life and behaviour of young people.

> The great Arab revolution that we are witnessing today is the first real revolution that is the work generation as they are known in the West, a generation that grew up digital. Generation revolutionaries are unique in that they do not draw on charismatic leaders to mobilise, nor are they in need of strong command structure to organise (Mahroum, 2011).

According to Mahroum, these three elements have led to the rise of the second society by furnishing young Arabs with cultural knowledge over the Internet. This is the generation, as defined in the West, which grew up with the digital:

> The Arab ‘Second Society’ grew on virtual networks, on pal-talks, YouTube videos, and social groups across various platforms on the Net. It is a society that thrives on modern and more effective ‘mobilisation structures (Mahroum, 2011).

The spread of new communication technologies, especially the Internet, with young people forming a high proportion of users, is establishing a new kind of society, and we are seeing the rise of a network society.

3.9 Role of online interactivity in social change

This second step discusses previous studies based on framework theories discussed above. It is to provide a background and frame the case about communication and social change including media

and social change and the increase in online interactivity. It also discusses how new media can be empowering, with a focus on women's empowerment, and how it affects social life and internet users' behaviour, as well as cultural and political aspects of media influence, the role of ICT in the Arab Spring and Libyan society in the information age. These frame the case study objective 3, which focuses on online interactivity, and give background about role of online interactivity and society.

3.9.1 Communication and social change

The relationship between media and social change is important because it is a kind of communication that may influence users and have effects on people's lives and on society at large in turn. Figueroa et al., (2002) studied the use of communication by aid and donor organisations to bring about social change in poor communities that have never thought about communication and to improve users' lives. The authors aimed to understand how the success of communication for social change can be accessed (Figueroa et al., 2002, p.2).

Figueroa et al., (2002) provided a practical resource with which community organisations, communication professionals and social change activities can address social issues. They hoped to develop a social change model and to translate a philosophy of participation into an effective process which could motivate groups to take collective action. They discussed the model of Communication for Social Change (CFSC) and described an interactive process whereby society conducts dialogues and undertakes collective action, working together to produce social change in society.

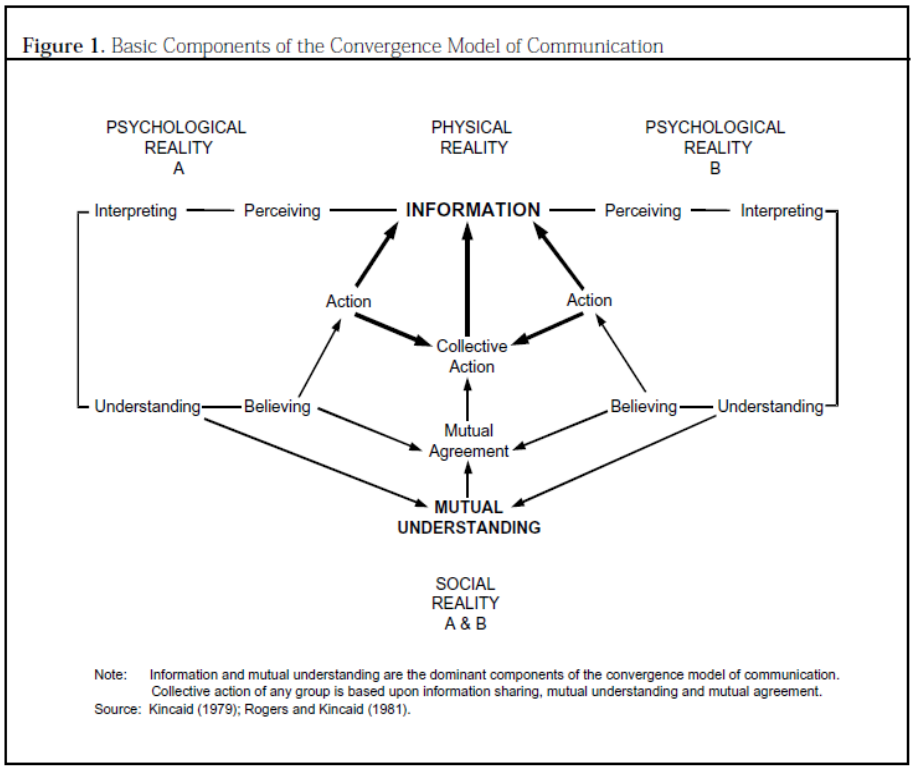
They noted the developments that are taking place in society by means of communication and established that: 'There is a widespread awareness in the field of development communication that community participation is a valuable end in itself as well as a means to a better life' (Figueroa et al., 2002, p.14). They saw social change as 'an ongoing process that can be spontaneous or purposeful' (Figueroa et al., 2002, p.3). More specifically, they saw change as cyclical and relational. They argued that an outcome of mutual change (rather than one-sided, individual change) can be achieved by a model of communication. They divided their work into three sections: an integrated model of communication for social change, social change process indicators and social change outcome indicators.

The integrated model of communication for social change describes a dynamic iterative process that starts with a catalyst or stimulus, which can be external or internal to the community and which guides the discourse on the social issue within society. This model postulates that the dialogue and collective action that guide society set and share objectives to produce cooperative action which can lead to improvements in the future. Furthermore, the authors emphasised four features of this model. First information is shared or exchanged between two or more individuals rather than being merely transmitted from one to one. Second, action results from the same information, which is transmitted from one to one or more participants, or to other kinds of media or institutions such as schools,

universities or movements. This feature of this model involves the understanding of the terms of the dialogue or ongoing cultural conversation which is treated by the participants of science of semiotics and hermeneutics. Indeed, the model stresses the importance of participants' perceptions and interpretations (Figueroa et al., 2002, p.3). Third, the sharing of information creates a horizontal, symmetrical relationship which is represented among two or more participants, who come to mutual and individual understanding, agreement and (collective) action. Finally, perceiving interpreting, understanding, and believing are processed by the outcome of the information (Figueroa et al., 2002, p.5).

The second model stresses interpretation and perception and draws on hermeneutics and the principals of semiotics (Figueroa et al., 2002, p.3). Relationship between two or more participants is created by sharing information, which represents a symmetrical and horizontal relationship (Figueroa et al., 2002, p.3).

Figure 3-1: An Integral Model for Measuring the Process and its Outcomes (Figueroa et al., 2002, p.4)



Figueroa et al., (2002, p.4) argued that 'the outcomes of information process by the personal are social – mutual understanding and collective action as well as individual perceiving, interpreting, understanding and believing'. They also noted that communication must be interactive if it is to lead to collective action and cause social change. Finally, they identified four types of social change: external general change, individual behavioural change, the social influence of individual behavioural changers, and social dialogue and collective action (Figueroa et al., 2002, p.6). The study mentioned the important process of the role of communication in the social change for the individual behaviour

and collective action; also, it presented deep views about personal and social action as a general change. However, there is no illustration about means that facilitate this social change as the new technologies bring users to have the ability to exchange, share and express information and ideas.

3.9.2 Role of media and social change

Rural society nowadays must respond to the rise of new communications technologies in this era of the global village. Rural societies in many countries have so far avoided modernity but might now modernise rapidly as a result of the influence of media, especially the Internet. Johnson (2001) sought to understand the role of television in rural life and its influence on the social, economic and political process that is currently revolutionising rural India. He found that television in India is an educational and developmental tool directed by the government and the rural areas are entering the age of consumerism as a result of the content of mass media, such as television advertising, which has made great inroads into village society and is having an impact on the rural way of life and on traditional relationships.

Johnson noted that the spirit of consumerism has been reinforced by the development of a market-led economy based on the profit principle and that the media has changed people's lives and relationships through its impact on ways of life and social organisation. The social structure would have taken several decades to change without the influence of the media, particularly aspects like social order, control and behaviour that were based on the underlying structure of community relationships. Rural village life has begun to mirror cosmopolitan life, as is reflected in the adoption of urban styles of life and work. For example, people spend their weekends with the family watching television, from which they receive many of their ideas. Rural societies are beginning to adopt many of the ideas, images, principles and values they see on television: 'The evidence suggests that their behaviour begins to reflect some of those values and images' (Johnson, 2001, p.153).

Johnson also noted that these influences can be seen in rural people's dreams and goals: young rural people now want their wives to be educated and modern looking, and they want to enjoy a modern lifestyle with sports, good health and a good job. In addition, foreign cultures and ways of life are subjects on television that influence rural societies, and sample groups reflected this influence when they were asked for their views on what comprised quality of life. Many valued the fact that television exposes them to foreign cultures and ways of life. In the political field, the media has also had an important impact: 'Television broadens the entrepreneurial base and acts as a democratizing agent by breaking the monopoly on information previously held by the rich and politically connected' (Johnson, 2001, p.156).

Johnson found that the sample groups were happy with how their lives had been changed by the media; this was especially true for women, who now knew more about modern lifestyle from the media. Moreover, Johnson noted that families had become more interested in and more aware of their

children's educational choices, which have been improved by media information and the new ideas gained from other cultures that television presented. The media influence Johnson identified is usually thought of as occurring in stages that gradually capture the full attention of audiences.

Johnson also noted that certain gender roles within the household are beginning to change as a result of television: women no longer have less status than men in every aspect of household life and both genders now decide their children's future together as a family because they are now more open to ideas and change.

In addition, Johnson pointed out that in society all classes of people, regardless of caste, gender, age and educational status, now have equal access to the same information and they are now aware of equality and freedom. Rural societies are active rather than passive in the communication process, especially regarding the television messages that pour into their homes. The study also noted that the media started as a limited development tool orchestrated by the government, but today has blossomed into one of the largest competitive organisations in the world. However, the equality in the social process and media influence is still an issue of investigation as traditional society especially in rural areas played a role and affects equality between men and women lives.

In conclusion, Johnson (2001, p.167) noted that 'rural villages have leapt from oral societies into the electronic age of mass communication'. Media such as television, radio and new media have effects not just on people's behaviour but on 'illiteracy which does not act as a barrier to information. The majority of villages, literate or not, have access to knowledge and information' (Johnson, 2001, p.167). Finally, Johnson evidenced the effects of media on the economic, social and political landscapes of village life and on the village's relationships, economic decision-making, political awareness, participation and worldview (Johnson, 2001, p.167).

3.9.3 The retreat of gate keeping and increase in interactivity

The idea of a gatekeeper and control of the media needs evaluating in the context of the Internet and social media because such media gives users more power and thus undermines attempts at control by traditional gatekeepers. Media experts are important because their opinions help us to understand the issue, and those acting as gatekeepers may be changing their behaviour in response to social media. Ali and Fahmy (2013) carried out research on three major conflicts involving protests in the Middle East and North Africa including Iran, Egypt and Libya by examining the characteristics of the gatekeeping practiced by citizen journalists. This is an important context for the use of social media during the uprising in Egypt and Libya during the Arab Spring.

The study evaluated the role of old media at the time of the development of the new media. It noted that with new media such as Facebook, Twitter, YouTube and blogs, the old media had new opportunities. For example, it could use social media to follow the situation in Iran at the time of the presidential elections when the Iranian government claimed that President Ahmadinejad had won the

elections with 63% of the vote. The "Green Revolution" rejected the results of the election and used social networking sites widely to document the struggle of the protestors, who used their technological ability to get textual and visual information out and to distribute content to journalists around the world via social networking sites such as Twitter. This allowed them to break out of the control of the Iranian government. Thus the protest was dubbed the:

> 'Twitter revolution' because the social media site actually complicated the picture of the Iranian people's struggle for justice and freedom ... Despite the Iranian government's strong gatekeeping role in regard to all media, the social media's main role in Iran was to create awareness of the issue to other social media users outside the country and grab the attention of international media. (Ali and Fahmy, 2013, p.61)

Subsequently in Egypt the so-called "Facebook Revolution" occurred following the death of a young man called Saeed who was beaten by the police outside a cybercafé near Alexandria. This led a young man called Wael Ghonim to create a Facebook page called "We are all Kaled Saeed", and within a week this page had more than 350,000 followers who were invited to protest against the regime. 'Similar to Iran, the influence of the social media was suggested, giving Facebook credit for starting the revolution' (Ali and Fahmy, 2013, p.62). Ali and Fahmy followed the situation in Egypt at the time of the revolution and noted that Egyptian people found their voice on social media as they sought to bring about justice, and that they gained a sense of freedom from these technologies. Ali and Fahmy also noted the relationship between old media such as television and new media such as social media in this revolution. The appearance of young Egyptian people on the TV helped to increase their number of followers on Facebook. Old media in the Arab world can be divided into two categories: old Egyptian media such as TV, radio and newspapers and Arabic and international media, which are broadcast through satellite, either through Nile Sat or Arab Sat. The appearance of Ghonim on TV, where he told the story of the creation of the Facebook page and wept for the people killed during the uprising, led to a rise in his popularity and increased the number of followers of his Facebook page. This suggests that the old media still retains a degree of influence, but also that people prefer the interactivity of social media, which has become a tool used by citizens to disseminate their struggles to the world through the western and international media. Photographs, videos and news items describing the situation and explaining the protests and its aims and goals were the subjects of people's actions on social media and were also sent to the Arab and international old media such as Al-Jazeera, Al-Arabya, the BBC and CNN.

Ali and Fahmy also followed the Libyan revolution from 15th February 2011, which occurred in the country that was ranked in the top 20 nations with the highest level of media restriction. The media and communications were controlled and blocked by the Gaddafi regime from the first week of the revolution. This was due to the prevailing opinion that:

> Most likely in Iran and Tunisia, and more recently in Egypt, social media were touted as being integral to the Libyan revolution. Inspired by the movements in neighbouring countries, Facebook, Twitter, and YouTube were used by protesters to upload raw footage, photos, and messages of the chaos. (Ali and Fahmy, 2013, p.64)

Ali and Fahmy noted the use of camera phones to produce videos and photos that, even though they were often of a poor quality, appeared to be credible first-hand accounts that resonated with audiences worldwide. On the other hand, social media claimed to have united Libyans which led to further governmental control and intimidation, which in turn led to further use of social media. These new means of communication gave young Libyans the opportunity to express their political opinions freely. Furthermore, young people's online interactivity gave journalists the opportunity to follow the situation and obtain news photographs and videos which could be sent electronically via the Internet. Finally, Ali and Fahmy claimed that social media was just one of many means that brought about the end of the Gaddafi regime. However, the integration between old and new media played an important role but the interactivity is a new feature of new media rather than old media. It is an action of those users who are being the participant and not mere audience. The study takes a part of integration between those old and new media rather than mention ability of interactivity which is the point of reviewing gatekeeper and agenda sitting theories.

In summary, Ali and Fahmy claimed that under dictatorships the media in general is tightly controlled and that these regimes often block the Internet and infiltrate social media sites to intimidate citizens online. Social media has many virtues, such as that it gives a voice to people who have no other way of reaching wide audiences. Rather than being the cause of these revolutions, social media created the opportunity for citizens, journalists and elites to have their voices heard which reduced the control of state gatekeepers in the face of increased interactivity among an ever-wider number of Internet users.

3.9.4 Young people's understanding of interactivity

In order to gain further insight into Internet's users' activities, Quiring (2009) aimed to define the meaning of the term "interactivity" and to explore the concepts of ordinary users (i.e. people who are not professional experts) about it after its appearance in the 1990s. He discussed the emergence of buzzwords during the appearance of new media, when online communication and digital media became part of everyday life and the concept of interactivity required a label. He wanted to discover whether users who are confronted with the term on an almost daily basis have a clear idea of interactivity, what they associated with the term, which media services and technical devices they believed to be interactive and why they thought so. In order to answer these questions, in 2005 he interviewed 38 people in Munich, Germany. The interviewees were all Internet users but were not ICT experts or in the media business and the sample included a variety of genders, ages, educational levels and professional statuses.

Quiring followed the concept of digital online interactivity across a seemingly endless number of web pages offering interactive services and briefly described it based on the extant literature in an attempt to establish interactivity as a theoretical concept. In his interviews he asked whether users had any ideas about what interactivity was, which devices and services they believed to be interactive and which they did not and the reasons for these beliefs.

To arrive at a definition of the concept of interactivity, he noted three types of schema: naive concept, operators and techno plus. He also noted three kinds of interactivity: interactivity as an attribute of a technological system, interactivity as an attribute of communication processes and interactivity as an attribute of user perceptions:

> The term 'interactive' and 'interactivity' are used to describe a wide array of different phenomena in everyday life. Both terms still seem to be regarded by practitioners, designers and ad-men in the media business as keywords that are able to catch the attention of potential users and support the sale of new digital media products. (Quiring, 2009, p.900)

Quiring noted that 58% of German people aged 14 years and above use the Internet and that they used services such as email, file sharing systems, electronic commerce, newsgroups, chat, computer games, web radio and different kinds of media websites. Those users are confronted with the term interactivity on a daily basis through the websites of newspapers and broadcasting stations, and 'they have grown up with interactive media' (Quiring, 2009, p.906). Quiring noted that the individual and social dimensions of interactivity are borrowed from everyday language:

> 'They are not specific to interactive communication and would also apply to traditional face-to-face interaction. Terms like 'participate' or 'communication between human' social dimension 'do' or 'call' individual dimension, indicate that our respondents perceive interactive communication as an extension of traditional communication via technological means (Quiring, 2009, p.908)'.

Quiring found that users believed that electronic devices and services are always interactive. Most users thought of computers because the different services available on computers, such as the Internet, online voting and search engines, allow them to be interactive. They also particularly mentioned online services that facilitate social relationships such as email, chat and dating, and in particular women over the age of 19 noted that communication is facilitated between humans who start to talk in chat rooms on the Internet.

The result of this study noted two important points concerning interactivity. The first is that interactivity is most strongly associated by users with social and individual issues, and that users can accomplish their self-development and social relationships goals by using media. Furthermore, Quiring found that the sample group expressed the opinion 'when I am online I feel like I am part of community' (Quiring, 2009, p.915) and that users think that interactivity resides in them and evolves

from social and individual action. However, the way of interactivity is important to mention and should be investigated for more illustration about it in social, cultural and political ways.

Finally, Quiring concluded that human communication interactivity (HCI) is a label that is used for all kinds of media products, including new media technologies, especially the Internet, which exists to receive digital signals and facilitate users' exchange, discovery, expression, knowledge and completion of online activities.

3.9.5 ICT and Libyan university's awareness

The use of ICT in universities in Libya has increased over the last two decades, and this is indicative of the globalisation in terms of media and new communication has substantially influenced people, society and institutions. The network society, enabled by the spread of technology, has given new meanings to communication in societies across the world, while many regimes and national systems have remained unchanged and therefore cannot keep up with the improvements brought about by the information age. Abod-her (2013) studied the impact of globalisation and the adoption of ICT in Libyan universities, by examining the use of computers, laptops, landline and mobile telephones, scanners and printers (see Table 3-6). He interviewed 44 graduate students, 6 higher education officials and 10 members of the academic staff at Tripoli University. He found that new communications technologies such as desktop computers, mobile phones, notebooks, printers and the World Wide Web are regularly used by Libyan University students.

Table 3-6: Type and frequency of use of ICT tools (Abod-her, 2013, 277)

Respondents	Computers and Laptops			Telephones and mobiles			Printers and Scanners		
	Always	Sometimes	Never	Always	Sometimes	Never	Always	Sometimes	Never
Graduate Students	44	0	0	44	0	0	0	29	15
Academic Staff	10	0	0	10	0	0	8	2	0
Higher Education Officials	6	0	0	6	0	0	5	1	0
Respondents	**Internet connection**			**Email and Social network sites**			**Word and Excel**		
	Always	Sometimes	Never	Always	Sometimes	Never	Always	Sometimes	Never
Graduate Students	40	4	0	36	8	0	43	0	0
Academic Staff	10	0	0	7	3	0	10	0	0
Higher Education Officials	6	0	0	4	1	1	6	0	0

Libyan society, which is relatively young, has a high rate ICT use compared to the other Arab countries. A report compiled in 2012 showed that Libya's ICT use index was 2.21, which was close to the highest index (Oman with 2.38) and far from the lowest (Sudan with 0.83). Table 6-2 below shows some useful key indicators of ICT use in Libya compared to other Arab countries.

Table 3-7: Key ICT indicators in Libya and some Arab countries (Abod-her, 2013, 266)

Country	Population	Mobile users	Internet users	Used PCs	Fixed telephone users	ICT Use Index
Egypt	81.348.421	83.430.000	21.671.400	5.878.810	8.714.200	1.47
Tunisia	10.732.470	12.387.656	3.432.988	1.272.643	1.217.781	1.71
Algeria	37.100.000	35.711.159	7.767.641	3.763.607	3.153.500	1.36
Oman	2.859.457	4.809.248	1.146.880	551.714	287.323	2.38
Libya	**6.000.000**	**10.000.000**	**1.355.796**	**892.601**	**1.012.100**	**2.21**
Iraq	33.564.325	24.413.656	5.510.556	2.545.761	1.945.00	1.03
Qatar	1.707.756	2.794.043	854.958	798.715	305.967	2.78
Sudan	41.919.368	25.107.343	6.959.517	2.068.436	483.617	0.83

Abod-her noted that the use of the Internet is an important aspect of ICT use and, indeed, may account for most ICT use. Libya Internet service provision began in 1999, and the Libyan Internet service is still weak. In 2009 there were 323, 00 users in Libya, representing a rate of 5.13 per 100 people. Moreover, in 2009 there were around 9,600 broadband subscribers representing a rate of 0.16 per 100 people, which meant that Libya was fourth in the north of Africa and fifteenth among the Arab countries (264). The Internet in Libya is an important means of communication with the world-wide community, including for educational, cultural and political needs, and Abod-her (2013, p.280) noted that many participants use the Internet in different places such as at home, work and university. Table 6-3 shows the sample groups' use of the Internet and place of use (Abod-her, 2013, p. 80). It is notable that graduate students appeared to use computers and laptops at work, university or elsewhere more than other groups.

Table 3-8: Where participants usually use ICT (Abod-her, 2013, p. 280)

Respondents	Computers and Laptops		
Graduate Students	Only at work or University	At home and at work or University	At elsewhere and at work or University
	12	9	23
Academic Staff	1	9	0
Higher Education Officials	0	6	0
Total	6	50	4
Respondents	**Internet**		
Graduate Students	Only at work or University	At home and at work or University	At elsewhere and at work or University
	12	9	23
Academic Staff	2	6	2
Higher Education Official	0	6	0
Total	35	19	20

Abod-her discussed motivations for ICT use, which he identified as predominantly study and private work:

> The majority of the participants reported that they used ICT to type documents and present work required by the institution as well as for their private work ... all sixteen participants used ICT for a variety of purposes ... graduate students worked with ICT tools to improve their understanding of their studies. (Abod-her, 2013, p. 211)

Abod-her, (2013, p.86) emphasised that the 'globalisation stimulates universities to share knowledge and expertise in their own countries by the use of ICT equipment from any location and any time'. He also noted that new social relationships with people from other cultures can be formed as a result of globalisation, although Abod-her (2013, pp.213-214) discussed it as an economic and political rather than a social phenomenon. As a political phenomenon, Abod-her (2013, p.215) noted that the research participants agreed that globalisation had changed how governments conducted politics and had brought about a total rethinking of political structures driven by the 'political pressures of more powerful states and the invasion of new ideas'. He demonstrated that participants in higher education really were aware of the role of ICT policy nationally and its role in institutions and people's daily lives:

> [A]n awareness of the ICT policy and the service offered by the HEPR is an important step in ensuring that ICT policy services are used effectively and make a difference to correspondent learning, and the teaching of administration. (Abod-her, 2013, p.230)

He pointed out that the main factors that drive and impact on ICT acceptance are globalisation and awareness (Abod-her, 2013, p.297). University students have a higher level of education than other people, which means that they become aware of digital innovations more quickly. The majority of the participants, especially graduate students, clearly understood that they could benefit from using and

adopting ICT for learning and administrative tasks. They all believed that ICT had advantages for their daily life and awareness. Abod-her's results can be summarised as two main points. Firstly, the cultural, economic, political and technological aspects of globalisation have driven the Libyan university education system to accept, use and fully adopt ICT: 'globalisation has opened up considerable opportunities for developing countries to grow more and to adopt new information and communication technologies' (Abod-her, 2013, p.82). This is one example of how globalisation has impacted on the improvement of people and institutions in Libya (Abod-her, 2013, p.296). Second, the adoption of ICT has led to an enhancement of the creative environment of Libyan public universities, which shows that it has become more important for people and institutions (Abod-her, 2013, p.297) and that Libyan universities themselves have an important role in the expansion of ICT use. The study is rich and noted important results about globalization time and Internet use at Libyan Universities; it would have been richer if research went through investigation of gender differences to give a wider picture and understanding of similarity and difference of Internet use of those university students and staff.

3.9.6 Online social interactivity at home and in cybercafés

The Internet's social uses can influence young people's lives. Al-Khauja (2000) studied the social and cultural effects the Internet had on young people. His study was conducted in universities with a sample group aged 18 to 35 in Jordanian cities that comprised 132 students, 73 men and 59 women, 95% of whom were under 21 years old.

He found that 67% of the sample spent more than three hours online every day, 67% of the sample considered the Internet very important in their life (Al-Khauja, 2000, p.7). 49% developed their social relationships through the Internet, 50% felt comfortable when they had been online and 62% felt happy on the Internet. 51% of the sample thought that the Internet did not have any negative effects on their lives; on the contrary, the respondents felt that young people acquired professional experience and were exposed to new political ideas when they used it (Al-Khauja, 2000, p.11).

> *56 % من المبحوثين يرون ان تصفح الانترنت يعطيهم رؤية سياسية جديدة للاحداث والافكار, 54% ايضا يرون انهم يحصلون على افكار جديدة , و 72% يتبادلون هذه الافكار مع اصدقاء اخرين على الانترنت)*
>
> 56% of the sample said that the Internet allowed them to have multiple views of political opinions and 54% of them thought that it allowed them to have new ideas and 72% used it to exchange ideas with online friends around the world. (Al-Khauja, 2000, p.12, translated by the author)

The study investigated Internet use in the early spread of use of the Internet society; it explored important views about Internet society. However, use of the Internet as online interactivity should go through uses categories such as social, cultural and political motivation that make illustration clearer. Furthermore, there are similar studies of young people in neighbouring Mediterranean countries. For

example Aslanidou and Menexes (2008) studied young Greek people aged 12 to 18 and their patterns of Internet use in the home. Their objective was to examine the duration and types of Internet use at home and to detect systematic behavioural patterns regarding its use and factors within the family environment at home that affected the use of the Internet. They also sought to develop a typology of students in relation to Internet use at home, based on their types of use and behaviour as well as on the possible effect of their social and geographical stratification, gender and age.

Aslanidou and Menexes found that Internet access remained at a very low level and that the Internet was insufficiently used for school purposes. Also, they noted that the Internet is an indicator of social and economic stratification since most young people with access to it came from family environments with higher educational and socioeconomic backgrounds and lived in urban and semi-urban areas.

Furthermore, Aslanidou and Menexes found that boys made up the majority of systematic users, and that they used the Internet mainly for entertainment purposes, seeing it as a place and space that safeguarded their 'privacy', with a majority of respondents preferring to surf alone (Aslanidou and Menexes, 2008). Parental supervision and monitoring seemed to be largely absent. The authors claimed that the frequency and type of Internet use was not significantly affected by students' places of residence. Their results indicated that 52.8% of homes had Internet connections, with alternative places of connection including Internet cafés and libraries. The results also showed that more than 66.1% of the respondents had had Internet access for over a year. The paper describes a point in the national uptake of the Internet in Greece, which was led by young people and included a mix of domestic and public use. However, the study could give a more useful view from users' parents as the study samples aged between 12 -18 years old and parents' opinion would be significant to understand the family support of the use of the Internet home.

Aslanidou and Menexes dealt with widespread Internet use and connections in homes and in public and gave some evidence of the purposes of Internet use. Moreover, they examined the possible effect of students' social and geographical stratification, gender and age on the domestic use of the Internet and found that Internet use is an indicator of social and economic stratification.

A popular kind of Internet access, especially in the areas where access at home is limited, is the cybercafé. This is one of the most important spaces for Internet access, especially in developing countries where home connections are less common. In Turkey as a neighbouring Muslim Mediterranean country, Koc, (2007), studied the potential impact of Internet café use on young Turkish people's social development. His dissertation measured four dependent variables: quality of social network with friends, quality of social network with family, participants' feelings about loneliness and pro-social attitudes. The online interaction in his research was categorised by the frequency of online activity, divided into educational/informational, communicational, entertainment and business usages.

Koc investigated important questions about the quality of relationships with family and friends and the impact of Internet café use. He found that the amount of time spent at Internet cafés and the frequency of different activities performed online did not influence feelings of loneliness (Koc, 2007, p.94). Other results also related to the above (neutral effect) were indicated in the analysis of pro-social attitudes on Internet café usage. Koc noted that usage did not cause weak or strong attitudes towards belonging to a community and helping others in that community.

He also demonstrated that the Internet not only offered an alternative sphere of communication to sustain existing social ties, but that time spent online, and frequent online entertainment activities seemed to lead to a reduction in the quality of social involvement with friends. However, it did not influence socialising with the family; he also noted that users spent their time online in fewer social activities that showed a negative impact of Internet café use (Koc, 2007, p.95).

The key elements of this study are first, that the feeling of loneliness was not related to the amount of time spent online; second, that measurements of social behaviour need to include online behaviour, which is now one of the features of modern social life for Internet users; and third, that measuring users' political online behaviour can give valuable evidence about the purposes of their Internet use. The study would benefit from deep investigation about gender difference; the comparison between men and women could show online behaviour similarity and difference.

3.9.7 Libyan university students and social online interactivity

The Internet use and media integration may have wider influences on people and society. Al-Saidy and Al-Guery (2008) studied students in three universities in Libya, namely Tripoli University, Nasser University and Musrata University, to cover both urban and rural areas by focusing on family bonding. They surveyed a sample group of 200 students, 110 men and 90 women, and divided the sample according to the academic disciplines the students studied. They hoped to identify the students' reason for being online, to investigate the effects of Internet use on family relationships and to discover the limitations and obstacles of navigating Internet sites (Al-Saidy and Al-Guery, 2008, p.23). They found that there was an increase of Internet use, with 70% of Libyan students being online. Furthermore, they found that the Internet is now one of the most important things in a student's life: 55.7% were online for 1-2 hours daily. 84% of students went to Internet cafés, 39.5% of whom were women (Al-Saidy and Al-Guery, 2008, p.24).

Al-Saidy and Al-Guery found that 47.9% of the students used the Internet for studying and 43.6% used it for e-mail. 18.6% used it to follow the news, while 12.9% used it to make friends and 12.1% as a means of spending their free time. Searching for general information was the main use with 53.5%; 70% of the sample used search engines for multiple reasons and 62.9% using it to chat.

أظهرت الدراسة ان 70% من المبحوثين يستخدمون الانترنت, حيث يستخدمه 55.7% بمعدل من 1-2 ساعة في اليوم, ويرتاد 84% مقاهي الانترنت, منهم 39% هم من الاناث, حيث تحقق لهم الانترنت اشباعاتهم الخاصة بواقع 70% عبر محرك البحث قوقل, بينما 62.9% يستخدمون الماسنجر والمحادثات مع الجنس الاخر

'70% of the sample uses the Internet, 55.7% of the samples spend 1-2 hours a day, 84% use the Internet in cybercafé, 39% of them are women. 70% of the sample gratifies their needs online, and 62.9% use Skype to chat with different genders. (Al-Saidy and Al-Guery, 2008, p.26, translated by the author)

Al-Saidy and Al-Guery noted both genders often spent at least two hours a day on the Internet, but women spent more than two hours when they had the opportunity to go to an Internet café because they tried to compensate for time lost on other days. Moreover, they noted that the students connected to the Internet via university laboratories, at home or at an Internet café. 2.1% of the students reported that their family always controlled the amount of time they were online, 9.3% said that their time online was regularly monitored and 88.6% had free access without any time limits.

According to Al-Saidy and Al-Guery, young Libyan people are now interested in the society of Internet friends, and they feel that they are more free and more active online, which makes them care less about real society. However, several obstacles to the use of the Internet were noted: 17% did not have computers and 30.6% had no Internet café nearby, so they could go online only twice a week. Social, cultural and familial controls are also obstacles, although government control was limiting of the students' ability to discover opposing political websites. This study is important in providing a framework for understanding the relationship between university students and the Internet, and it adopted a uses and gratifications approach.

From one side, this study is important as background for our study as it focused on university students and measures their use of the Internet. However, some points of it could be criticized as it does not measure owning of computers and Internet connection at home which is very important to measure the spread of ICT in society and give a wider picture about the relation between University students' family and the Internet. From another side, there is no important value to measure the daily period of using the Internet to know that samples are using the Internet in the morning or afternoon.

They focused on Internet use impact on family bonding in Libyan society; they mentioned that it focused on the positive and negative use of the Internet. The value of measurement of positive and negative use of the Internet is not strict as it related to the society traditional culture. The negative and positive value often related to the local cultural point of view rather than related to the freedom and equality value. The cultural and social measurement of Internet impact on society is not always accurate because the traditional Arabic society culture does not encourage open communication and doubts its purposes, especially for females. However, open communication and online interactivity have more positive influence on users' lives and social development.

Another important critique of the study was that there is a danger to family value and cohesion because University students spend more time online. They noted that this impacts on users' family interaction and caused family disintegration that threatens the entity of the Arab society. However, there is no comment on any positive impact of Internet use on family development in cultural and political dimension. Also, the study did not classify the use of the Internet in social, cultural and political categories, and it focused on family cohesion which intended to spend more time with the family compared to surfing the Internet. Importantly, the study clearly neglected the political dimension of the use of the Internet, where there is no indication of freedom of navigation, access to information and interaction with content. It did not address the issue of freedom of expression as one of the important motivations of Internet use.

Al-Shaebany (2007) investigated students' motivation for use and preferred sites and the social effects of the Internet on users, based on a survey of 180 young people aged 17-25 in Sabrata.

Al-Shaebany found that the majority of young people consider the Internet to be a means of accessing a new world. 50% of the young people in Sabrata, which is in a rural area, were interested in academic sites, and 26.1% of them looked for political news. On the other hand, chat rooms interested 75.5% of young people which may mean that they are interested in becoming part of the society of the global village.

> *"اظهرت الدراسة ان اغلب الشباب يرون ان الانترنت هي وسيلة اتصال حديثة, حيث ان 50% من شباب سكان الظواحي .. يبحثون في مواقع اكاديمية, 26.1% يهتمون الاخبار السياسية, بينما يلاحظ ان 75.5% يهتون بالمحادثة مع اخرين عبر الانترنت"*
>
> Study showed that majority of young people see the Internet as a means of modern communication, 50% of rural area interested in academic sites, 26.1% political sites news, whereas 75.5% interested in chatting with online friends. (Al-Shaebany, 2007, p.25, translated by the author)

Al-Shaebany noted that 55% of Libya's rural young people believe information they find on the Internet. Also, 66.27% thought that the Internet affects young people's personality and 67.2% said that it helps them to solve their problems. Most significantly, 72.2% felt freer online, but the report did not specify whether this was from a political, sociological or personal standpoint (Al-Shaebany, 2007, p.26).

91% of the young people agreed that they needed an Internet connection and 100% believed that it helped them to form new relationships. 72.2% of young people used an Internet café connection, 94.4% felt happy online, 76.8% preferred to chat with the other gender and 50% were interested in navigating educational sites. The study discovered that there was government control and censorship, with 56.2% reporting difficulty accessing some sites.

أظهرت الدراسة ان 91% من الشباب يوافقون انهم يحتاجون للانترنت وبنسبة 100% يرون انها تساعدهم في اقامة علاقات جديدة. بينما 94.4% يحسون بالسعادة حينما يكونون متصلين بالشبكة, غير ان 76.8% يفضلون المحادثة مع الجنس الاخرو و 50% منهم يهتمون بالبحث العلمي

> The study showed that 91% of young people agree that they need the Internet, 100% found it help them for having new relationship, 94.4% feel happy when there are being online, 76.8% prefer chatting with other gender and 50% were interested in academic research. (Al-Shaebany, 2007, p.28, translated by the author)

The study would be better if it included gender comparison. The importance of it is that it shows the extent of young people's social use of the Internet in rural areas and its effects on them. It did not focus on political aspects or on social change.

3.9.8 Social media and empowerment of Arab women

Mourtada and Salem, (2012) studied social media in the Arab world and found that there had been a significant growth of social media use in the Arab region; social media is now used by millions of Arabs:

> 'the societal political transformations that swept the Arab region throughout 2011 have empowered large segments of the population. Many stereotypes have been shattered, with Arab youth; 'netizen' and women become the main drivers of regional change' (Mourtada and Salem, 2012, p.269)

The authors noted that social media use affects how users interact socially and has led them to become more active and civically engaged political participants, entrepreneurs and agents of social change. To explain the gender social media gap in the Arab world, Mourtada and Salem, (2012) illustrated that there are two barriers to women's social media use: personal factors such as abilities, skills, levels of education, access to means of communication, confidence in social media, privacy and security (i.e. level of trust in ICT), and environmental factors such as the social and cultural constraints that constitute the largest barriers to women's social media use in the Arab world (Mourtada and Salem, 2012, p.272).

Mourtada and Salem suggested that closing the virtual gender gap requires efforts to address discriminatory attitudes and cultural constraints on women. They noted that social media is a tool for women's empowerment: 'Arab women and youth in particular have become more engaged in political and civil actions, playing a leading role in the rapid and historic changes sweeping the region' (Mourtada and Salem, 2012, p.269). Moreover, they pointed out that the majority of respondents felt that social media had the potential to be an empowering and engaging tool for women whether in social economic, legal, political or civil contexts (Mourtada and Salem, 2012, pp.272-273). This shows that agents of women's empowerment in Arab societies have changed and that the penetration

of these societies by social media could change them dramatically, but they didn't explain more about this change and how.

Mourtada and Salem noted that Arab societies suffered from lack of political representation, limited media freedom, limited channels for interaction and a lack of real civil society. Indeed, until only a few years ago, the information flow for Arab societies remained from the top – the government – down to the bottom - the citizenry and society in general – in an overwhelmingly hierarchical structure. Today, in contrast, Arab society has been given more opportunities for empowerment and communication through new channels such as mobile telephone, satellite TV and social media, all of which allow user interactivity. Finally, the study noted that social media empowers young people and women, and during the Arab Spring, social media played an important role in most of the movements in the region, however, there is no more explanation how.

Social media use in the Arab region is empowering women and young people and is likely to continue to do so. It therefore will continue to play a crucial role in Arab societies in the future (Mourtada and Salem, 2012, p.274) and change how their governments interact with them.

3.10 Role of the Internet in social development

This section discusses previous studies to provide a background and frame the case about the Internet and social development. These review the Internet role in societal and cultural change, and the new Internet role in social activism and cultural liberation. This is followed by discussion of social media and public opinion. It also discusses the new communication technologies during the Arab spring, ICT as a form of online interactivity during the Arab Spring and the new media generation and the Arab Spring opening the closed regime.

3.10.1 Social media's role in societal and cultural change

The role of the Internet in social change can be seen as the role of communications of society, and new communications technologies are playing an important role in developing society and provoking social change. The Arab Social Media Report (2012) sought to understand the role of social media on development and growth in the Arab region in 2011 and 2012. It focused on the impact of social media on freedom of expression and media consumption behaviour and on its empowerment of young people and women, as well as on the societal and cultural transformation taking place in the Arab region, which is contextualised with statistics on social networking platforms including Facebook, Twitter and LinkedIn. The report conducted an online survey between March and May 2012 and received 4754 respondents with average response rate of 86.4% in Egypt, Jordan, Oman, Kuwait, Bahrain, the UAE, Saudi Arabia and Lebanon. The respondents were young people aged 18- 30 with an equal gender divide. The report concluded that there is a growth in number of social media users in Arab countries, although young people aged between 15 and 29 still make up around 70% of

Facebook users in the Arab countries. The gender different showed that 33.7% of users are female, which is lower than global average whereby women constitute roughly half Facebook users:

> 'the largely free flow of information online and the cross-border interconnectivity and influence of social media users in the Arab region have contributed to this regional sense of empowerment with a large of society. (Arab Social Media Report, 2012, p.3)

Social media has empowered users politically in several Arab countries and shifted perception of culture and identity.

> 'Many claim that social media usage and by association, its ability to expose people to a variety of idea and opinions has led them to become more open and tolerant of these views. (Arab Social Media Report, 2012, p.6)

The free flow of online information across borders has contributed to the empowerment of large sections of Arab societies by encouraging users to tolerate different points of view, feel more connected to their communities and contribute to society. Moreover, the authors noted that social media reinforced national identity, but also that users felt more like global citizens. That social media emboldened people and encouraged political change was demonstrated by the revolutions of 2011, but this change needs to be more illustrated in those users' lives. Social media has had a widespread impact on communities and societies in the Arab region:

> 'Social media users generally hold positive views on its impact on, and potential for creating social change, Ultimately, social media is being seen and used as an agent of change. (Arab Social Media Report, 2012, p.6)

Social media allows users to connect with other people across the world and access their opinions and experiences. It has reinforced users' sense of identity in this virtual network, and also bolstered their sense of national, global and religious identity. Social media may also have the ability to impact society globally with spread of new communication technologies at the time of new Internet which needs more investigation in terms of gender and area of living.

3.10.2 The new Internet, social activism and cultural liberation

The features of the new Internet enable its users to access a wide range of cultural, social and political information which, as Fauad (2009) argued, that Web 2.0 might allow people to be more active and freer. He explored Arab young people's modes of interaction on Facebook along with their cultural and social contributions, but the available data remains limited. He presented a representative sample of 1500 Arab users of Facebook, and, after six months of observation, concluded that users gradually revolted against the traditional Internet, which he called the 'Old Internet' (92). He went on to discuss the Internet revolution as a democratic element in society and noted that the Arab world must face a new reality as it grapples with the issues raised by the new forms of communication:

> ‘Online communication in the Arab world has become one of the most important facts of today’s Internet and therefore it must be promoted, and services granted to facilitate communication and interaction, as networking has become inseparable from content accumulation and circulation. (Fauad, 2009, p.92)

One of the important traits of online democracy is that it creates an environment that is free from traditional ways of life and the control of closed regimes. This environment has materialised through blogging websites such as Blogger and TIG, as well as through multimedia websites such as Facebook. It can therefore be considered a product of the “New Internet”, because it has emerged from the forms of online communication that have become the most important part of the content accumulation and circulation of today’s Internet. Fauad also tried to explain the process of the Internet’s development. For example, the Internet facilitates improvements in users’ privacy, interactivity and free browsing of websites, while the new Internet has changed radically to become simultaneously a communication tool and a forum that is easy and free to use: ‘These features have changed users’ perception of networking from a website service per se to one that links all other services’ (Fauad, 2009, p.93). This is important as it illustrates Facebook features of interactivity as an impact of technologies on users’ lives; leading to achieve change in their lives.

Fauad noted that in Arab countries there has been a rapid growth in the numbers of Internet users and that 74% of the users who regularly accessed Facebook were aged 18 to 35, whereas, he did not mention any gender results that would make the results more useful and give deeper understanding. Fauad found that the most common activities carried out by young Arab Facebook users included fulfilling personal, social, cultural, political, psychological, economic and educational needs. 40% of Arab users use Facebook for socio-political reasons and engage with issues related to politics and political reform in the Arab world. They also seek to achieve social goals and confront religious issues. ‘This is likely given the fact that technological advancement renders the use of Facebook politically, educationally or simply for fun a pleasurable experience per se’ (Fauad, 2009, p.99). He concluded that social networking sites can be used to achieve social goals, so it is likely that young people will carry out social activity outline.

3.10.3 Social media and public opinion

Social media allows its users to be at the centre of the modern world and engage with its social cultural and political values. Zoda (2011) investigated the role of social media in changing public opinion at the time of the Tunisian revolution by focusing on blogs, social media and social websites in Tunisia from January 2012 to March 2012 through a sample group of 390 university students aged between 18 and 25 at El-Haj el-Akhdar University.

Zoda focused on the influence of social media on young Tunisians and the role of social media in the virtual incitement of public opinion during the Tunisian revolution. He aimed to understand the role

of social media and discover how it functioned within the broader set of media, including old media. He had three important findings. First, most respondents said they browsed social media sites daily, spending between one and two hours on this activity. The majority of respondents (over 50%) used a personal computer to access social media sites, and claimed they were exposed to social media sites on an on-going basis. The Tunisian university students also noted that the information included in their personal accounts was true.

Second, Facebook, YouTube and Twitter were the most commonly used sites by Tunisians. More than half of the subjects claimed to have online 50-100 friends, and more than half only interacted with their friends. Almost two thirds of respondents accessed social media sites because they contained different information from that published by the mainstream Tunisian media. More than two thirds of respondents believed that social media reflects reality truthfully, although more than a third of respondents checked the validity of what is published by looking at other sources.

Third, the majority of respondents continued to belong to or interact with the opposition in Tunisia and asserted that their goal is to overthrow the regime. Less than two thirds of respondents believed that change in Tunisia had been brought about by the dissemination of content in support of the revolution. More than two thirds of respondents believed that bloggers are able to change the political system, and more than half the respondents said that they were permanently exposed to social media sites during the revolution. It is therefore clearly the case that whatever the material realities, Tunisian Internet users believe that social media work was central to the country's recent political change. The study focused on political change rather than social change even though there is always relation between both variables in society. Also to understand this change, it is important to investigate area difference as poor people played an important role in the Tunisian revolution.

3.10.4 New communications technologies during the Arab Spring

Social media played an important role in spreading the impetus for demonstrations during the Arab Spring, leading some researchers to coin the phrase "the new Internet". However, Web 2.0 as new Internet faces some criticism that it is not a new version of the World Wide Web; it is still using Web 1.0 concept and technologies. It still uses HTTP protocol even though it added an additional layer of abstraction on top (criticism, 2017). According to Nielsen, L., (2007) Web 2.0 can be dangerous in some ways, 'it is dangerous for your profile if you focus on over-hyped technology development, and you risk diverting resources from the high-ROI design issues that really matter to your users and your profile'. Moreover, Alexander, B., (2006) emphasised that 'the flow of micro-content between domains, servers, and machines depends on two-way access. Web 2.0 can break on silos but thrive in shared services. Still, silos and shared services are not mutually exclusive'. Another critique is that Web 2.0 could be criticised in the term of 'a second bubble', the economy has written of 'Bubbles 2.0', with the lack of business the product could be developed by too many companies without any new

models (criticism, 2017). However, Web 2.0 as new Internet played an important role in Arab society users' lives especially during the Arab Spring.

However, the role of new Internet as new communication technologies can be seen in the social media use which led to the improvement of the work of use and gratification theory to explain the greater role of the Internet on people's lives and society. Stepanova (2011) focused on the new mass forms of socio-political protest facilitated by social media networks and ICT, which played an important role in the rapid disintegration of at least two regimes in Tunisia and Egypt and contributed to socio-political mobilisation in Bahrain and Syria. She also focused on aspects of popular organisation and communication that were heavily influenced by ICT and social media networks. According to the Egyptian Ministry of Communication and Information Technology (MCIT) there were about 17 million Internet users in Egypt in February 2010. These included the most active users, who were generally young, urban and relatively well-educated, and who were some of the main anti-government protesters during the Egyptian revolution. The government blocked Egyptian Internet access and slowed down connections. Nonetheless, Stepanova (2011, p.3) concluded that 'No region, state, or form of government can remain immune to the impact of the new information and communication technologies on social and political movements'.

Governments were neither aware of nor interested in the far-reaching effects of the new communication technologies and therefore were unable to evaluate the connection and disconnection in their societies. Attempts to block Internet access led users to find new technological solutions and software to maintain connection, such as utilising router/path diversity methods, IP proxy servers and Google's voice-to-Twitter applications. These new solutions were also used in a similar way in other societies: 'the impact of net-based technologies and social tools goes beyond that region and will continue to affect developing and developed countries alike' (Stepanova, 2011, p.3).

New communications technologies allow users to deal with information, other users, and websites. When people are free to browse, publish talk, and write, they improve their knowledge. This creates a relatively well-educated generation which makes up not only the bulk of activists, but also a sizeable percentage of the population at large. In addition, the western life style, which includes features such as democracy, freedom and individualism, is juxtaposed with traditional Arab societies by these new communications technologies. The growing spread of this advanced networking, emanating primarily from pro-democracy, pro-western forces, will continue to have a profound influence in the developing world (Stepanova, 2011, p.4). One major effect of these new communications technologies, especially social media, is the huge role they have played in revealing a new vulnerability and opportunity in developing Arab countries. The Internet may be seen by the majority of people as the new technical basis for mass demonstration However, the study focused on time of demonstration during the Arab spring while the rise of the Internet and its development of social media build those users willing step by step.

3.10.5 ICT as form of online interactivity during the Arab Spring

The revolution in Tunisia happened at the end of 2010 and the new communication technologies played a huge role before and during the events, as well as before and during the subsequent Egyptian revolution. Allagui and Kuebler (2011) evaluated the role of new media in the Arab Spring in persuading people to join the revolution and encouraging them to break down the regime's control. They focused on Tunisia and Egypt because they thought that both revolutions shared a number of similarities regarding the role of communication technologies**.** Those two countries witnessed a new kind of revolution that was organised using social networks particularly social media and Facebook, which has caused these revolutions to be known as "Facebook Revolutions". These communication technologies mean that political activism now happens both on the streets and online.

Allagui and Kuebler emphasised that the demonstrations in the streets during the Arab Spring were not in solidarity with the popular political parties and were a response to difficult socioeconomic conditions such as unemployment, the high cost of living and corruption that was facilitated by media innovations and the existence of networks which enabled people to conduct relationships and maintain contacts online, and thereby obtain all sorts of information. They noted that these networks are now a kind of important interactivity between people:

> 'These networks are creating space territories for interaction and strong reciprocity based on an altruistic sharing behaviour ... members of networks created revolutionary content on their mobile and digital media and distributed this same content to their friends, families and members of other networks. (Allagui and Kuebler, 2011, p.5)

Allagui and Kuebler noted that the users of the social networks who opposed the dictatorships, online censors and offline police conducted a range of online behaviours which were then picked up by the mainstream media. This means that social media played a central role in the Arab Spring and was an important role in distributing the demonstrators' ideas and complaints to the majority of the population. For example, Tunisian demonstrators published videos and photographs on the websites of foreign media that were covering the events, thus relaying anti-government information, while the Tunisian people offered to host Egyptian web pages and sites when they were blocked by the Egyptian government. These types of behaviour were predicted in Castells (2007), who argued that they help to shift power from the state to the network society.

Allagui and Kuebler noted that the old media were not as active as the new media in the revolutions, mainly due to regime controls. New media is becoming more active than old media by providing regular platforms and more information day by day. Its usage is rapidly increasing at home, school; work, in cybercafés and now by wireless connections in most public spaces such as libraries, hotels and airports and by mobile phone connections (Allagui and Kuebler, 2011, p.1438). This gave a good illustration about the role of social media even though there is a lack of view about Twitter as it played an important role as Facebook did regarding the high use of it in both countries.

Allagui and Kuebler also noted that the development of digital networks enables observers to assess the success of the revolutions in Tunisia and Egypt and the extent to which these networks were used by people for socio-cultural and socio-political reasons. These new uses of social media have had huge effects on society, culture and politics by means of the Internet, mobile phones and other communications tools, and have demonstrated the power of these online relationships and interactivities.

Al-Raood (2012) analysed the opinions of journalists from Jordan who were reporting on the revolution in Tunisia in order to understand the role of social media as an impetus of the Arab Spring, its role in allowing people to overcome the government's media control and its effects on local, regional and international public opinion and on the old media. He took samples of the daily posts on Facebook, Twitter and YouTube of newspaper, television and radio journalists from November 2011.

Al-Raood aimed to ask the journalists to rank issues according to three levels of significance, low, medium and high. First, the Jordanian journalists ranked the role of social media as an impetus of the Arab Spring high. The experts believed that social media sustained the momentum of events, transferred the details of meetings quickly and facilitated the process of communicating with the outside world. Moreover, they believed that it coordinated the movement of protesters, mobilised protesters, transformed protesters into pressure groups and changed patterns of political communication between demonstrators. It allowed rotation between protesters, built solidarity between protesters across the state and helped them to contribute to a unified vision. It also levelled social inequalities and removed social and geographical disparities between demonstrators.

Second, the journalists considered the role of social media in resisting the censorship and controlling governments to be important. It contributed to the emergence of actor journalists and overcame the withholding of information and news practised by governments, becoming a strong competitor to government-controlled media.

Third, the journalists believed that social media's impact on public opinion was essential. Social media content is fresh and potentially more exciting than that of the traditional media, and news is often provided by the people involved. Social media therefore may hasten the decline of traditional media, helping to weaken the role of traditional political groups in organising action.

The Jordanian journalists argued that social media played a huge role in the Arab Spring, especially through resisting the censorship of dictatorship regimes, influencing general opinion, inciting protests and having a huge impact on traditional media.

3.10.6 The new media generation and the Arab Spring, opening closed regimes

Social media played an obvious role in the Arab Spring, and this will be used as an example to investigate the role of the new media, especially the Internet, in the second society. Media's role under a closed regime has been investigated by many authors and researchers interested. For example,

Philip, N., (2011) studied Tunisia and Egypt before and during the Arab Spring by examining people's activities on Facebook, Twitter, YouTube and blogs as forms of social media. Databases were collected from those social media, and a map of important political websites in Egypt was created. Political conversations carried out by Tunisian bloggers were examined by analysing three million Tweets, which were considered to be evidence of the critical role played by Twitter in the Arab Spring. Philip had three key findings: first, that social media played a central role in shaping political debates in the Arab Spring; second, that the evidence showed that political conversation was the main focus of users, both urban residents and women, and both before and during the revolutions, in a clear attempt to put pressure on the regime through new communications technologies to obtain democracy; and third, that in both Egypt and Tunisia bloggers used the Internet to attack the regime with news from foreign TV websites such as the BBC and CNN. Philip noted that a spike in online revolutionary conversations often preceded major events on the ground. The political conversation on the social media was clearly driving protests on the street and therefore may have played a significant role in toppling the regimes in both countries. This is evidence of new communications technologies producing an immediate effect on the political situation. The words used most frequently by users were "liberty" and "democracy", and common subjects included criticisms of the presidents of both countries; in Tunisia more than 20% of blogs were devoted to this subject. This is the important result of this study about the role of social media in the political category that led the change in users lives and society.

Philip also argued that social media helped to spread democratic ideas across international borders. He emphasised how advocates of democracy used social media to connect with each other and with supporters outside the country, who helped them to publish news, videos and photos around the world. Moreover, Philip claimed that social media brought about a cascade of messages about freedom and democracy across the north of Africa and Middle East, which helped to raise expectations about the success of other political uprisings. Additionally, he noted the occurrence of political conversations on social media between users in different Arab countries, who compared the situation of the presidents of Egypt and Tunisia, thus helping to publish up-to-date news, photos and videos.

Philip concluded that social media played a crucial role in the political uprising in the Arab Spring: 'social media played an important role at key moments in the events of this year … Facebook functioned as a central node in networks of political communication' (Philip, 2011, 23). However, the Arab Spring is not only a political change but also there are other types of change in society including social and cultural dimension.

Furthermore, new communications technologies have developed the capacity of people to affect local politics: 'Social media, such as Facebook, Twitter and YouTube, have several kinds of impact on local systems of political communication' (Philip, 2011, p.22). Philip claimed that social media provide

new opportunities and new tools for movements to respond to conditions in their countries. Social media established transnational links between individuals and groups, and this enabled people to identify their aims, receive solidarity from others and organise and publish their actions (Philip, 2011, p.23).

3.11 Chapter summary

This chapter proposed five theories to act as the framework of this thesis each section presented theories followed by a background of previous studies. First, the chapter in section 3.1 reviewed a number of areas of the empirical and theoretical literature, starting with the ideas of the information age and the network society and the rise of the global village. It discussed the development of modern communication and reactions to these developments. The discussion also focused on the interaction between mass communication and society and the processes of network society in a time of new communication technologies. The idea of the digital divide was used to illustrate the development of the Internet in the network society.

For fact preview and background, in section 3.2, the chapter discussed previous studies for measurement of Internet use; it discussed and reviewed the literature about the spread of new communication technologies and the measurement of Internet use. This can be summarised and interpreted as occurring in eight steps which are outlined below. First: the spread of new communication technologies spread and widely used every day in a majority of countries, including developing countries in Africa (Sonaike, 2004) and the Middle East, in the Arab world and in Libya (El Gamal, 2010, The Silatech Index, 2011, Ali, 2014). Second: the majority of Internet users are young people and especially university students (Alghalban, 2007, Abo-Harara, 2010, Shen and Shakir, 2012), and men and women's use is quite similar (Aibraheem, A., 2008), with women having high usage rates (Shen and Shakir, 2012). Third: the widespread use of the Internet is helping to narrow the gap between the first and third world (Sonaike, 2004). Fourth: there is significant Internet use in both rural and urban areas in the Arab region, in middle-income countries such as Libya and also in poor areas (Ibrahem, 2008, Abo-Harara, 2010, The Silatech Index, 2011). Fifth: Arab culture is based on religion and tradition, both of which exert an influence on conceptions of gender and age, but in the last fifty years Arab societies have witnessed important developments such as in education and literacy which have led to opportunities to narrow the gap between the genders. This social character is nonetheless still oppressive to women, and Arab women fall to the lowest level of the digital divide (Elsafty, 2005). Sixth: users are using the digital device such as desktops, laptops, mobile phones and smartphones (Zuehlke, 2012). Seventh: Internet connections in both urban and rural societies have developed and are widespread, with home connections (Alghalban, 2007), and mobile phone Internet connections being particularly popular (Zuehlke, 2012). Eighth: users spend on

average two hours and more per day (The Silatech Index, 2011) and the majority of users began using the Internet 6-10 years ago (Shen and Shakir, 2012).

The chapter in section 3.3 then examined the uses and gratification model as a tool for understanding elements of the media used in this new networked society. The chapter noted that this approach had gained new relevance in the context of the networked society. Moreover, motivations and needs are important for understanding gratifications that are personal, social, cultural and political. This approach could therefore provide a basis for understanding the motivations that underlie new media activities and new forms of interactivity. The main motivations for Internet use are social, cultural and political, including surveillance, knowing what's going on in the world, contributing and finding information and reading about local and international news (Louis, 2003). Users consider the Internet, especially social media such as Facebook, to be important to them and as a part of their daily activities (Ziany, 2010). These daily online interactivities can be summarised and interpreted as occurring in five steps which are outlined below: (1) Social gratification by means of communicating with their friends, group discussions, video talk, chatting and messages (Ziani et al., 2015). Furthermore, users in rural societies interact to develop their personal relationships, and rural women use the Internet in this way more than men do (Rabea, 2006). The Internet is a social technology, and young people feel more comfortable online than they do with their families (Louis, 2003). (2) Cultural gratifications include entertainment, enjoyment and overcoming temporal and spatial limitations to share their ideas and opinions (Ziany, 2010). Rural users seek entertainment, enjoy being able to go online and see the Internet as a key informational resource (Louis, 2003). Users also use the Internet for academic purposes, to present their culture, to avoid social control and to fulfil their personal and educational needs. (3) Political gratifications include expressing opinions freely (Ziani et al., 2015), sharing ideas and opinions, feeling beyond security monitoring and political control (Ziany, 2010), reading the local and international news and feeling more comfortable (Louis, 2003). (4) Both men and women gratify their social cultural and political needs; the most substantial gender differences are that women feel freer online and they like to express their opinion on such social media as Facebook more (Ziani et al., 2015). Indeed, Arab women are heavy Facebook users (Ziany, 2010). (5) Finally, new communications technologies such as computers, mobile phones, and the Internet influence young people's values in the social, cultural and political areas and change their opinions.

In section 3.4 and section 3.5 the chapter reviewed framework theories for online interactivity, social media and interactivity for gratification. This presented the role of Internet interactivity in social change; it reviewed agenda-setting theory as a tool for understanding elements of the rise of this new, networked society. Agenda setting theory is a part of media effects research and related to the gatekeeper theory that explains the process of media influence. Understanding this in the context of mass participation in interactive media is a key to exploring social change in the networked society. Understanding how such interaction meets the uses and gratifications in a context of individual and

group agenda-setting can be a framework for understanding the social change that is happening due to the influence of the Internet and the appearance of a new society.

In section 3.6 the chapter described social change theory, not as a backbone of this research but as a complement to the sociological theory that could help to explain the appearance of a new society. This presented the role of new communication technologies especially the Internet in social change.

In section 3.7 the chapter then reviewed the second society theory as a framework for understanding the social change caused by the Internet. This theory helps to explain development happening and the elements that lead to change in society. The review demonstrated the role of new communications technologies, especially the Internet, in developing society, and identified some elements that might be central to this process. The role of the media is significant in the development of communications and affects societies substantially, as is especially evident in modern society, which is witnessing the rise of new features as it enters an era of prevalent online information and of the global village. More deeply, it focused on new Arab society based on the idea of the second and new society in relation to new communication technologies especially the Internet.

In section 3.8 the chapter discussed the role of online interactivity in social change. This discussion illustrated literature abilities on the social, cultural and political influence of Internet use in three steps. These can be summarised and interpretation as occurring in five steps which are outlined below: First, it discussed communications and social change and noted that communication plays a key role in social change and is a dynamic interactive process that stimulates change as a collective action (Figueroa et al., 2002). The media, therefore, play an important role in social change. In Arab society, women have less status and freedom than men, but with modern media technologies everyone, regardless of caste, gender, age, and educational status has equal access to information and is equally aware of modern life (Johnson, 2001). Developing societies, both urban and rural, have been greatly impacted by modern media, which influence the economic, social and political landscape of village life, including the villagers' relationships, economic decision-making, political awareness, participation and worldview (Johnson, 2001, Figueroa et al., 2002). These can be established through online interactivity on new media such as Facebook, Twitter, YouTube, and blogs. Such new media can escape the control of government gatekeepers through their interactivities features and thereby allow users to follow the news and participate as creators and protestors, as they did during the Arab Spring in Egypt and Libya to fight regimes and express their political opinions (Ali and Fahmy, 2013). Second, the section reviewed online interactions on new media as a kind of communication whereby people follow authors and ideas (Quiring, 2009). Also, it reviewed ICT particularly by raising awareness (Abod-her, 2013). The review concluded that there are three types of interactivity: (1) interactivity as an attribute of a technological system, (2) interactivity as an attribute of communication processes and (3) interactivity as an attribute of user perception. Online interactivities

are email, file sharing, electronic commerce, newspaper groups, chat, computer games, radio and video media websites, all of which facilitate social, cultural and political content and exchange (Quiring, 2009). Third, the literature review found that online interactivities as a type of communication interaction include: (1) Social interactivities – it was noted that young people and university students spend more than three hours online a day (Khauja, 2000), and see the Internet as a space that safeguards their privacy, with a majority preferring to surf alone (Aslanidou and Menexes, 2008). Internet usage did not lead to either an increase or a decrease in loneliness (Koc, 2007, Saidy and Al-Guery, 2008). (2) Cultural online interactivities: it was noted users perceive the Internet as a place to encounter and generate new ideas (Khauja, 2000) and change their life environment (Mourtada and Salem, 2012). Rural users interact to receive new ideas from other cultures and want their wives to be educated and modern looking and hope to enjoy a modern lifestyle, including sports, good health and a good job (Johnson, 2001). The Internet is also an indicator of social, cultural and economic stratification (Aslanidou and Menexes, 2008, Saidy and Al-Guery, 2008). (3) Political online interactivities: it was noted that Internet users had a new vision of political ideas and news and discussed issues with others who had political views (Khauja, 2000, Aslanidou and Menexes, 2008), also, the variable measurement of user's political online interactivities is noted in the same level of interest (Koc, 2007). Internet usage is a stronger predictor of political participation than time spent with another mean of communication. Contemporary media use widened users' political participation and substantially affected their behaviour (Saidy and Al-Guery, 2008). During the Arab Spring, new communications technologies played an important role in the Tunisian and Egyptian revolution (Allagui and Kuebler, 2011, Mourtada and Salem, 2012). Online interactions in this context included publishing videos and photographs on the websites of foreign media that were covering the events, thus relaying anti-government information, and hosting materials that had been blocked by the government: Tunisian users offered to host Egyptian web pages and sites when they had been blocked (Saidy and Al-Guery, 2008). Through social media, users could overcome the government's media control, which had an impact on local, regional and international public opinion and played a huge role in the Arab Spring (Saidy and Al-Guery, 2008, Al-Raood, 2012). (4) Both genders interact with Internet content (Aslanidou and Menexes, 2008). Online interaction can empower women and allow them to develop their abilities and skills. They face some barriers to accessing online media however: level of education, access to different means of communication, confidence in social media, privacy and security issues and level of trust in ICT, as well as environment factors such as social and cultural constraints, which constitute the largest barriers to women's social media use in the Arab World (Mourtada and Salem, 2012). Also, by online interactivities, women's empowerment in Arab societies has been developed and social media actual perception invaded the reality in the Arab region and it could potentially help in changing these societies. (5) Another illustration noted that social media in the Arab world is now passing from perception to reality (Mourtada and Salem, 2012). For urban and rural areas, the amount of online interaction has increased (Al-Shaebany, 2007, Aslanidou and

Menexes, 2008, Saidy and Al-Guery, 2008) and the uses of social media have had huge effects on society, culture and politics, demonstrating the power of online relationships and interactions.

In section 3.9 the chapter reflects on these issues in relation to the role of the Internet in social development and recent social change in Arab societies. It illustrated the role of Internet use as a communication tool and its influence in changing and developing society is an important issue. This section discussed the literature about the role played by Internet use and online interactivity in gratifying users' needs. It illustrated the changes happening in society through online behaviour, which is a feature of the information age and of the global village, and which played an important role in the Arab Spring. The Internet has three main roles: First, social media has a role in societal and cultural change (Arab Social Media Report, 2012), and communication had an essential impact on society during the Arabic Spring, which the literature noted was heavily influenced by ICT and social media networks. Users are able to find new technological solutions to maintain connections and overcome governmental control of the Internet (Stepanova, 2011). Also, social media played a central role in shaping political debates during the Arab Spring (Philip, 2011), when it developed users' awareness (Fauad, 2009, Abod-her, 2013) and gave users the opportunity to continue to belong to or interact with the opposition, particularly in Tunisia, where the majority of respondents asserted that their goal was to overthrow the regime (Zoda, 2011). Second: social media plays a role in online social and cultural activism and encouraging certain behaviours. This role is achieved through the spread of advanced networks that emanate primarily from the pro-democracy west into closed regime (Philip, 2011). Social media has played an important role in giving people in developing Arab countries more opportunities, especially in the context of the Arab world's very traditional societies (Stepanova, 2011). Social media establishes transnational links between individuals and groups that enable people to identify their aims, receive solidarity and organize and publish their actions (Fauad, 2009, Philip, 2011), and bloggers are able to change a society's political discourse (Zoda, 2011). Third: users can achieve social, cultural and political liberation through the Internet, as is shown by the use of social media to build public and incite opinion during the Tunisian revolution (Zoda, 2011). Furthermore, the literature noted that societies in rural area are more liberated than before as a result of new media. This liberation includes democracy, freedom, and individualism, which stand in contrast to the values of traditional (rural) Arab societies as a result of these new communications technologies (Stepanova, 2011). For example 'Facebook functioned as a central node in networks of political communication' (Philip, 2011, p.1), and in general ICT use improved life in Arabic countries during the Arabic Spring (Allahui and Kuebler, 2011) and led to social and cultural liberation (Fauad, 2009).

Chapter 4: Methods

4.1 Introduction

This chapter discuss the research methods which have been utilised to understand the use and the role of the Internet in Libyan universities students' lives. It presents a broad explanation of the methodology employed to answer the research questions and achieve this thesis's aim and objectives. In this chapter, the methods are presented in four parts. First the methodology, research method design, justification of the research design, quantitative and qualitative methods used and the triangulation of methods. Second, the main quantitative data collection, based on surveys and questionnaires, are described, as are their design and organisation. Third, it discussed the demographics of the sample and its design. Fourth, complementary qualitative methods, including interviews, their samples and questions and qualitative analysis methods are outlined, and the thematic analysis of journal articles and ethical considerations.

Methodologies cannot be false or true, but only less or more appropriate to a study's aims and objectives (Silverman, 1993). A study's methodological and data collection methods comprise its overall approach to meeting its research objectives and must be described clearly. This study's objectives focus first on describing the experience of Internet use, including usage rates, time spent online, types of connection and any difficulties or obstacles faced in using the Internet. Second, they seek to identify the purposes and motivation for using the Internet and the gratifications that are achieved. Third, they measure users' awareness and the factors that persuade users to browse sites, users' online interactions and their anticipated social, cultural and political online needs. Fourth, they measure these factors as evidence of the role of the Internet in the emergence of a "new society".

4.2 Methodology

Methodology is defined as a set of techniques and procedures employed by researchers to construct a systematic plan to achieve defined research aims and objectives (Glatthorn, 1998). Gill and Johnson (1997) noted that methodology is a process of interaction between the study's conceptual framework, including its questions, and the empirical world, which includes data collection and analysis. It is, therefore, important to be able to demonstrate a clear, logical and reflexive relationship between research questions and field questions (Clough and Nutbrown, 2007, p.39). Ron Rice (1989, p.469, cited in Jones, 1999) states that: 'research on the use and implications of Computer-Mediated Communication System (CMCS) reflects a variety of disciplinary paradigms, technological distinctions, and evaluation approaches'. Thus, the study methodology is driven by research questions, and 'Methods should be chosen for their appropriateness in answering the questions posed' (Grix, 2010, p.137). Babbie (2004) noted that research methods are chosen depending on the nature and the structure of the research problem. Therefore, the choice of research methodology must not be

influenced by whatever approaches happen to be popular, but rather by the selection of the most appropriate methodology for fulfilling the research's goals and objectives by justified methods.

4.3 Research methods design

One of the main reasons for designing a research method is that it governs what data is collected, and what tools are used and what methods are employed for data collection. It guides the researcher in the processes of collection, analysis, understanding and observation (Nachmias and Nachmias, 2007). Moreover, research design is important in forging a link between the theories and arguments that inform the study and the empirical data that is collected. The research outcomes are affected by the processes chosen (Cohen, Manion and Morrison, 2011). Therefore, the optimum research design involves using appropriate methods to answer questions and examine the variables, and, at the same time, to investigate, assess the situation and understand the case study hypotheses. Furthermore, the research design should direct the selection of resources and remain the framework for the information collected, and it should specify the relationship between the study and the variables. The procedures of every research activity are outlined by the research design, and the essentials of research design as an activity and time-based plan; always based on the research as summarized by Cooper and Schindler, (2003). For many forms of research, analysis concerns the interrelationship between research paradigms, which include deductive and inductive reasoning and quantitative and qualitative approaches. Moreover, traditional methodologies need to be adapted to the Internet research environment in which communication technologies and socio-cultural norms challenge existing research assumption and premises (Jones, 1998, p.32). Gay and Airasisan (2003, p.20) noted that quantitative and qualitative approaches should be 'thought of as a complementary method that, when taken together, provide broader options for investigating a range of important topics'. The process of integrating these diverse paradigms can better illustrate the findings, and they can complement each other in an effective way.

4.3.1 Selection and justification of the research design

In order to design an appropriate method, it was necessary to consider the nature of research questions, which principally concerned the use of the Internet by young people, specifically university students. There are many reasons for gathering different types of data using a mixed methods approach, including that the results from one method can help to develop or inform the other (Greene, Caracelli and Graham, 1989). Denzin (1978) pointed out that 'The combination of methodologies in the study of the same phenomenon' (p.291), and also noted that multiple and independent methods can produce fuller results, especially if undertaken by different workers investigating the same problem. This includes reaching the same conclusion, lending greater validity and reliability than a single methodological approach can bring to a study problem.

To accomplish this study's goal, there are multiple approaches which could be used. Jankowski and Jensen (1991) argued that quantitative methodologies could be used quite effectively to inform the more commonly used qualitative audience methodologies of interpretive media research. Moreover, according to Mangan (2004), quantitative and qualitative methodologies are usually connected to the positivist and phenomenological paradigms respectively, and both methodologies can supplement each other by offering a different perspective. Amaratunga et al. (2002) pointed out that qualitative data can complement quantitative data by aiding with conceptual expansion and instruments, while, by finding a representative sample and locating deviant samples, quantitative data support qualitative data. The optimum methods for this research would be a combination of qualitative and quantitative methods which will aid with the conceptual expansion and the development of research instruments in order to supplement the largely quantitative data.

4.3.2 Quantitative and qualitative research approaches

Quantitative research

According to Altameem (2007), quantitative methods could be an extreme form of empiricism based on the explanation and control of phenomena. Furthermore, if used as a traditional scientific empirical approach, the data analysis involves numbers and will depend on statistical principles. Therefore, 'purpose of quantitative research is to explain observed phenomena (Jones, 1998, p.33). Additionally, quantitative research often but not always uses a deductive or confirmatory "top down" scientific method, which is used primarily for description, explanation and prediction based on quantitative data, in particular on the statistical analysis of study variables and of the results, with the aim of generalising them and attaching numbers to the relations between variables (Ary et al., 2002). There are two types in quantitative research, experimental and non-experimental, and for this non-experimental research, things are measured as they are, and no attempt is made to change their behaviour or conditions (Hopkins, 2000). Survey research is the common tool used for non-experimental research in exploratory studies, casual comparative studies and correlation studies. It is used to gauge the opinions and attitudes of different groups and measure their characteristics. It can be used to address a range of issues; according to Ary et al. (2002), it is a form of correlation research which determines whether two or more variables form some groups and to examine direction and strength of the relationships between them. Surveys can also be used for causal comparative research investigation which is the cause for or the consequence of differences between groups of people (Fraenkel et al., 1996). Quantitative research is focused on testing theories (Ary et al., 2002).

Qualitative research

The qualitative approach is often based on verbal data that expresses respondents' opinions, feelings or beliefs. It is used to describe variations in phenomena, situations or issues. Moreover, 'the purpose of qualitative inquiry is to understand observed phenomena' (Jones, 1998, p.35), which it attempts to do through a naturalistic phenomenological approach and by describing the variables which are

required to cover multiple issues when assembling the required information from fewer respondents (Kumar, 2005). According to Saunders et al. (2006), the qualitative research interview is important for developing a sufficient level of competence to analyse the results and for gathering sufficiently detailed and worthwhile information for the analysis. Also, according to Gubrium and Holstein (2002), the qualitative interview is widely used for data generation within the social sciences. Face-to-face and screen-to-screen interviews can be conducted with individuals or sample groups. They are useful means of addressing research questions, aims and objectives. They can be conducted to produce data that is in depth and highly detailed. Additionally, they are a vital means of collecting data about opinions, feelings and ideas to obtain a wider, clearer and deeper understanding of the phenomenon being studied and of how the variables influence the society being studied.

Braun and Clarke (2006) pointed out that there are six phases of conducting thematic analysis: becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and finally producing the report. According to Guest, MacQueen and Namey (2012), thematic analysis goes beyond simply counting phrases or words in a text and moves on to identify implicit and explicit ideas within the data. The primary process of developing themes from the raw data begins by recognising important data that can subsequently be encoded and interpreted. These codes and interpretations can include comparisons of theme frequency, identifications of theme co-occurrence, and the graphical display of the relationships between different themes. The flexibility of the thematic analysis approach allows it to be used in both inductive and deductive methodologies (Hayes, 1997, Frith and Gleeson, 2004). It is a very useful method which researchers have adopted to capture the intricacies of meaning within a data set (Guest, MacQueen and Namey, 2012):

> The thematic analysis is able to offer the systematic element characteristic to permit the researcher to combine analysis of frequency of codes with analysis of their meaning in context, thus adding the advantage of a truly qualitative analysis. (Marks et al., 2004, p.57)

Thematic analysis takes the concept of supporting assertions with data from grounded theory, and its analysis is also related to phenomenology in that it focuses on the human experience subjectively (Guest et al., 2012). The chief advantage of the thematic method is that its flexibility allows researchers to apply multiple theories across a variety of epistemologies (Braun and Clarke, 2006).

The main differences between quantitative and qualitative methods

The research method is procedures and strategies for doing research (Ten Have, 2004, p.26) therefore, for research design it is necessary to understand the distinction between quantitative and qualitative methods. The quantitative method of discretion measurement used allows the researcher to question how many and how often and with a process based on mathematical calculation. However, the qualitative method is based on non-random sampling and uses feeling, emotion, and words as non-quantifiable data. ‘Often the distinction between qualitative research and quantitative research is

framed in terms of using words (qualitative) rather than numbers (quantitative) or using closed-ended questions (quantitative hypotheses) rather than open-ended questions (qualitative interview questions)' (Ceswell, 2014, p.32).

Table 4-1: Main differences between methods

		Quantitative	Qualitative
Requirement	Question	Hypothesis	Interest
	Method	Control and randomization	Curiosity and reflexivity
	Data collection	Response	Vewpoint
	Outcome	Dependent variable	Accounts
Ideal	Data	Numerical	Textual
	Sample size	Large (power)	Small (saturation)
	Context	Eliminated	Highlighted
	Analysis	Rejection on null	Synthesis

Main differences between quantitative and qualitative methods

4.3.3 Mixed methods and triangulation

Triangulation is the use of diverse research approaches in one study with: 'Numerous attempts at integrated research over the past two decades have results in labels such as triangulation' (Jones, 1998, p.37). According to Gay et al. (2003, p.37), mixed methods should be 'thought of as complementary methods that, when taken together, provide broader options for investigating a range of important topics', and they are therefore 'central to the development and testing of theory' (Kadushin et al., 2008, p.47). Triangulation is defined as 'the combination of methodologies in the study of the same phenomenon' (Denzin, 1970, p.297). Denzin noted that multiple and independent methods should be used to instigate the same problem, and, if they all reach the same conclusion, then this has more reliability and validity than a single methodology approach alone.

Multiple methods give research more rigour, and, when deployed carefully, can maximise a study's strengths and minimise its weaknesses (Sekaran, 2000). Moreover, according to Johnson and Onwuegbuzie (2004, p.18), the fundamental principal of mixed methods research is that it combines the strengths of quantitative research with the strengths of qualitative research to allow the researcher to learn more about the topic of the study and to compensate for the weaknesses of both methods. There are four types of triangulation:

1. Triangulation theory: the use of more than one perspective or theory in study.

2. Methodological triangulation: the use of quantitative and qualitative approaches.
3. Triangulation research: the use of more than one researcher to research the same phenomenon or problem.
4. Triangulation of data: employing different sources such as questionnaires, interview, documents and observation for data collection (Denzin, 1978).

Therefore, the term triangulation is defined as 'measuring the same concept using two or more methods. Triangulation will achieve a better estimate of the error inherent in any measurement, both within and between methods' (Kadushin et al., 2008, p.47). To mitigate the negative influence of only collecting data from self-reported questionnaires, qualitative components of mixed method studies can be helpful (Mao, 2014) because qualitative data collected through interviews with open-ended questions can be used to shed some light on the quantitative findings (Bryman et al., 2008).

Therefore, for this study, taking into account the above discussion and the study objectives, triangulation seems to be an optimum approach: 'there are no barriers to triangulating qualitative and quantitative methods' (Howe, 2012, p.1). Data triangulation was used through the complementary use of a literature review, questionnaires, and semi-structured interviews with parents of Libyan young people, semi-structured interviews with media experts and the thematic of media documents. Therefore, the triangulation method used here is a mix of quantitative and qualitative methods. According to Howe (2012, p.5), quantitative survey data can 'converge with or diverge from data collected via face-to-face interviews'. He noted that mixed methods analytical techniques are used to synthesise quantitative results of paper and online surveys and the qualitative results of interviews (Howe, 2012, p.5). When this method is used 'the result is an integrated view that narrowly focuses on a particular social phenomenon' (Jones, 1999, p.37).

4.4 Main quantitative data collection

In order to gain real data for analysing the study's questions, the main data collection would cover basic information and four areas. The basic information covered the respondents' backgrounds and comprised age, gender and year of study. The four additional areas about which data was collected were use of the Internet, gratification, social anticipation, cultural and political online interactivity and measurement of the role of Internet use in young people's lives and, finally, opinions and feelings about Internet use. The choice of data collection tool was influenced by the sample size and location. The types of data which were to be collected were:

- Main data obtained from both paper and online surveys about the use of the Internet, time spent online, gratifications and online interactivity. It was based on two main variables: location and gender. These two variables were further augmented by key factors such as the respondent's year of study and by three other survey sections which discovered other factors including social, cultural and political factors.

- Complementary data was collected using two methods. First, qualitative methods in the form of interviews were used to explain additional elements such as the circumstances of the users and to gather additional in-depth information from parents and media experts. Second, a thematic analysis of media articles was undertaken. This provided complementary data about the idea of the emergence of a new society.

The combination of these two types of data collection should result in an effective and efficient investigation centred on the study's objectives that will obtain results from a variety of data sources.

4.5 Surveys

As noted, the main methods used in this research are quantitative using questionnaire-based field survey. This study used paper and online surveys to collect the main data, and this method has been used in a wide range of systematic research (Cooper, Blair and Triplett 1999).

4.5.1 Reasons for adopting survey method

The general aim of the survey was to collect data from a large population of university students who are users of the Internet in Libya about the rate of use, the motivations for use, gratifications obtained and interactivity. Berger (2000) noted that the quantitative approach allows for a higher degree of analytical precision about the subject being investigated than is often afforded by a solely qualitative research methodology. A survey is appropriate for investigating information based on personal or demographic differences within samples, as Wimmer and Dominick (2011, p.185) stated: 'If researchers seek to analyse various individual characteristics such as age, gender, income, or attitudes about different issues of large groups of population, then the survey technique should be adopted'. Furthermore, surveys are used to gather human subject data such as opinions and feelings, especially from large groups of participants (Hansen et al., 1998, Gunter, 2000). Surveys are a convenient and cost-effective way of collecting large quantities of data through standard measures in order to compare behavioural variables and measurements (Kumar, 2005). From the survey data could be generalised and 'an appropriately conducted survey can also enable a researcher to generalise the findings from the population being studied' (Wimmer and Dominick, 2011, p.48).

4.5.2 Questionnaires

The advantages and disadvantages of survey questionnaire, according to Collis and Hussey (2003), is one of the most important sources of information for quantitative research, especially when there is a large target population, because it can provide rich data by focusing directly on the subject under study. Moreover, questionnaires enable participants to respond without the intervention of the researcher. One of the rationales for using questionnaires is that it gives an opportunity to ask standard questions and obtain specific types of answers (Berger, 2000, p.191). In addition, it facilitates comparisons between sub-groups of respondents. According to Creswell (2003), researchers devise

questionnaires to assess attitudes in various social circumstances, to measure opinions on a wide range of social and political issues and to explore various demographic permutations. Moreover, Creswell (2003) and Babbie (2004) pointed out that large samples are made practicable and have a greater probability of producing statistically significant results. In this way, even when multiple variables are investigated, standardised questionnaires ensure that uniform data from various groups can be collected, interpreted and compared in a precise way.

A self-completion questionnaire survey is adopted for this study of a sample of Libyan university students. According to Hansen et al. (1998) and Oppenheim (1992), the self-administered questionnaire is a valuable technique that is widely used in social science research. Moreover, Gillham (2000) noted that there are rational advantages to adopting questionnaires as a data collection instrument:

- The questionnaire approach saves respondents and researchers time and expense.
- It permits anonymity and is convenient for respondents, allowing them the time to check facts and think about their answers.
- It allows the generation of multi-standardised data with which to make comparisons between a set of variables.
- It is a useful and easy way of analysing and examining the relations between different sets of variables.

Furthermore, according to Kumar (2005), the questionnaire is an inexpensive method and the data it produces is more uniform and standard than that generated by other procedures. Seliger and Shohman (1995), noted that, through the anonymity of questionnaires, sensitive data can be obtained from respondents. It is easy and quick to administer, since self-completed ones can be sent out by post or distributed in very large quantities simultaneously, whereas the process of conducting interviews is very time-consuming. The questionnaire format is structured to be adequate and suitable for statistical analysis because the raw data collected can be rich and easily interpreted using various types of statistical methods.

There are some disadvantages to adopting questionnaires. The aims and objectives of research often require researchers to use questionnaires with closed questions, which limit the richness of response that is possible (Oppenheim, 1992, Bell, 2005, Barce, 2008). The questionnaire might be difficult to understand when it has complex elements behind its design, such as various categories (Berger, 2000, p.189), and self-completed questionnaires in particular are open to misinterpretation: they can lack clarity, and the response rate can be low. According to Berger (2000), questionnaires sometimes lead to inexact responses due to ambiguity in the questions. Dillman (2000) pointed out that respondents may be deterred from answering personal questions of, say, a sexual or financial nature, thereby affecting the response rate. However, Bryman and Bell (2007) and Collis and Hussey (2003) argued

that careful design can ameliorate these weaknesses by including multiple types of questions and clearly divided sections.

The survey used in this research can be evaluated thusly:

- The survey used in this research was specifically developed for this study to avoid these disadvantages and to capture data about the influence of the Internet on young people's lives.
- It was designed and distributed explicitly for this research and made more appropriate by using both types of survey, paper and online, which are more adequate and appropriate than an interview or telephone interview.
- The respondents were encouraged to be honest and relaxed when they answered, and they were given as much time as they wanted to complete the questionnaire.
- The questions were written and printed such that they were clear and enabled the sample participants to understand and answer easily, thus avoiding ambiguity and misunderstanding (Bernard, 1994, p.264)

Surveys can be conducted on paper or online. There are some advantages to paper surveys, including that:

- They ensure the researcher the choice of the sample and of the time at which the survey is conducted.
- They give participants the opportunity to review their answers.
- Researchers have the opportunity to answer questions about any misunderstandings that arise.

Online surveys also have advantages, including:

- Online surveys help researchers to distance themselves from the society being studied and may be cheaper to use in a shorter amount of time (Bachmann and Elfrink, 1996, Taylor, 2000, Yun and Trumbo, 2000).
- Online surveys enable Internet researchers to access groups, individuals and societies that would be difficult to reach by any other means (Garton, Haythornthwaite and Wellman, 1997).
- Online surveys have features as part of their process that ensure that the participants do not neglect to answer some questions and that they cannot move on without completing them all.
- Online surveys might be a good way of investigating Internet use because they are only accessible online.
- Online survey systems provide daily reports about the progress of the survey.
- With regard to response rates, online surveys are equal to or better than traditional surveys (Mehta and Sivadas, 1995, Stanton, 1998).

- Online surveys may allow the researcher to send questions or comments to the participants so as to avoid unsafe situations or problems.
- Online surveys have been used in Libya for research (Al-Asfar, 2002).

By using both paper and online surveys the researcher can ensure that the sample is relevant to the project. Doing so could also give the research the opportunity to evaluate whether the participants followed the process as was expected. Therefore a mixed form of survey was the most appropriate way to collect the main data and thereby to examine the role of the Internet in young people's lives in Libya.

4.5.3 Questionnaire reliability

The design of the study questionnaires is presented here in three steps: an introduction, the study questionnaires design and the questionnaires.

There are three types of questionnaires:

- Hand-delivered and collected questionnaires, which allow the researcher to check who has answered (Saunders et al., 2009).
- Postal questionnaires, which are sent by post with return envelopes included.
- Digital questionnaires, which are distributed electronically by email, by posting on Facebook or by other Internet means.

Dillman (2000) noted that there are some items which have to be considered to ensure good questionnaire design, including:

- The graphic design which helps to identify the survey.
- An informative title which helps respondents to approach the questions.
- The name of sponsor, indicating the security of the responses.

A poor questionnaire design can lead to insufficient results and conclusions (Walliman, 2006), whereas a well-designed questionnaire can help to obtain higher quality results. Also, according to Williams (2006), the success of survey needs good and appropriate questionnaires, because any weakness or poor design will affect the sources and response rate. The main characteristics of reliable questionnaires are:

- Questions that are clear, quick to respond to and specific.
- Appropriate questions that provide valid information and reliability.
- Questions that respect respondents' privacy and dignity.

4.5.4 Study's questionnaire design

This study's questionnaires were designed to be appropriate for answering the study questions and achieving the research objectives. They used three types of questions: First, dichotomous questions: closed questions with response options of Yes, No and Other. This type of question was chosen because it yields precise data about facts such as 'male-female', 'yes-no' and 'easy-difficult' that are enough to answer some of the study questions. (See appendix B, p, 337-349). The benefit of these closed questions is that:

- They help respondents to make quick decision and save time.
- Their answers are easy to compare.
- They are also quick and easy to analyse (Law, 2013).
- They are appropriate for collecting demographic data which can help to produce an accurate picture of the respondents.
- The data they produce can be easily coded and analysed.

Second, closed questions with multiple choice options, including expected answers such as 'yes-no-don't know' or 'yes-no-not often' depending on the subject of the questions asked. These are chosen by reviewing previous studies and predicted answer options related to the subject, and also by having a precise understanding of what information is needed to fulfil the study objectives. Therefore, closed questions are used to collect data information using precise multiple-choice options that relate to the study questions (See appendix B, p, 337-349). The benefits of these multiple-choice closed questions are that:

- They are easy to analyse, and every answer can be given a number or value that allows the researcher to analyse and interpret the data more easily.
- They can produce specific data that is appropriate for computer analysis.
- They limit the number of specific responses because the researcher offers answer options that are directly relevant to the study's interests (Law, 2013).

Third, closed questions requiring a Likert-style response scale in which respondents are asked how strongly they agree or disagree, a method which is widely used in new media research (Wimmer and Dominich, 2011). According to Cohen et al. (2007), the Likert scale is widely used to allow users to express degree in their responses to a given statement or question. Moreover, the use of Likert scale in the majority of Internet and media studies is evidenced by the literature review; this method is commonly used to measure attitude. This type of question was chosen to measure the participants' degree and intensity of agreement and their intensity of feeling. It also measures users' extent of, for which interactivities, type of interaction and opinion and feeling. These rating or scale questions are often used to collect opinion data, scales with four, five or six points are usual and the integration of

two types of data might occur (Creswell, 2003). This study adopted questions with a five-point rating scale (Saunders et al., 2009): 'strongly disagree, disagree, neither agree nor disagree, agree and strongly agree' (See appendix B, p, 337-349). These questions were designed and informed by reviewing the previous social science, new media and Internet literature as discussed in chapters 5 and 6 (Rabea, 2006, El-Ghalban, 2007, Aibrahem, A., 2008, Ibrahem, M., 2008, Shen, 2009, Abo-Harara, 2010). The benefits of these Likert-scale questions are that:

- They allow respondents to make the right decisions and judgments with a flexibility of scale choice.
- Respondents are comfortable with these choice scales (Hussey et al., 1997).
- Researcher has the opportunity to use several statistical techniques to analyse the data, which is made easy to code and analyse by the use of a standardised scale (Hussey et al., 1997).
- Media and Internet studies use the Likert scale widely.
- It is appropriate for gathering participants' opinion and feeling and measuring their attitudes because they can indicate a degree of agreement or disagreement by multi choice scales.
- The participants are not forced to take a stand on a specific topic but can match their answer to their level of agreement, allowing them to answer more easily (LaMarca, 2011).
- This type of question can measure respondents' motivations for Internet use, gratifications and how often they are interested in browsing specific sites and social media.
- It can also measure interaction with Internet content and users' opinions and feelings about social, cultural and political uses of the Internet.

4.5.5 Survey questions organisation:

The questions on this topic were divided into: (a) basic information and (b) four sections that elicited answers to the study questions and objectives which were intended to cover the main research issues as illustrated in (chapter 1, section: 1.6, pp, 10/11). (see survey questions in appendix B, p, 337-349)

4.5.6 Basic data

This part is important because it ensures that comparisons based on the students' gender and location is valid. It obtains basic information about the participants:

- - Gender (male/female).
- - Age (from 18 to 26).
- - University disciplines studied.
- - Year of study
- - Area of residence (urban and rural areas).

Those demographic questions are easy to answer (Dillman, 2000), and, because they are not personal, they were presented at the front of the survey. The aim of this section was to obtain data for comparison between the participants' genders and locations. The main questions were divided into four question groups based on the study's aims and objectives.

4.5.7 Section (A): level of Internet use and experience

This section was designed to investigate participants' experience and use of the Internet and to discern whether the participants face any difficulties or obstacles in going online. This description would examine users' experience, including their computer ownership, use rate; time spent online and place of connection. It also seeks to examine any difficulties or obstacles to Internet use (see objectives and study questions in chapter 1, section: 1.6, pp. 10/11/12).

To collect data and answer the study questions related to this objective, this section comprised eight questions:

1. Ownership of computers to establish how new communication technologies are distributed in society
2. Whether participants used the Internet (yes / no)
3. How many years they have used it (from 0 to 4 years, from 4 to 6 years and for more than 6 years)
4. Weekly frequency of participants' use of the Internet (every day, from 3-5 times a week or 1 time a week)
5. For how many hours a day the participants use the Internet (more than 5 hours, from 3-5 hours or from 1-2 hours).
6. From where participants connected to the Internet (home, university, cybercafé or smart phone)
7. Whether there were any obstacles or difficulties encountered when using the Internet (yes / no)
8. What those obstacles or difficulties were (cost, other difficulties, no obstacles and difficulties found or control and monitoring)

4.5.8 Section (B): purposes of Internet use and gratifications

This section aimed to achieve the second study objective, which related to the purposes of Internet use and its gratifications. This study objective seeks to examine the respondents' purposes for using the Internet and the social, cultural, and political needs that are satisfied by going online, and to describe any differences between urban and rural areas and between genders.

The questions in this section either required Yes / No answers or used a five-point Likert scale. The questions addressed:

- Description of users' Internet navigation to satisfy their needs by answering question options (easy or difficult)
- Purposes and motivation for using the Internet with Likert-scale responses including twelve suggested answers of purposes starting from 'strongly disagree' to 'strongly agree'. (see appendix B, p, 335-347)

Sensitive questions about the purposes of Internet use and about gratifications sought one of the following answers: social options such as contact with other friends; cultural options such as have more sources of information, entertainment or relaxing; and political options such as expressing opinion, finding political news or obtaining political information from around the world.

4.5.9 Section (C): anticipated social, cultural, and political impacts of Internet use

This section achieves third study objective which is to investigate whether users' online interactivity anticipated social, cultural and political impacts on society through the role of the Internet in university students' lives. It also explores users' awareness of and the elements that encourage their Internet use (see chapter 1 pp, section: 1.6, pp, 10/11/12).

Five questions were formed to gather data about young people's online activity, awareness of their favourite sites and the elements that persuade them to navigate these sites.

The first part investigates which sites and social media the participants use and how they interact with them. A Likert-style response was invited to a question about the subjects the participants interact with online. It includes eleven kinds of social, cultural and political interaction and allows participants to rank their interactivity ('always', 'very often', 'sometimes', 'rarely' and 'never').

The second part investigates users' awareness of the elements that persuade them to navigate the sites and which sites and social media they are interested in:

- Users were asked whether they have favourite sites that they regularly visit (yes, no and I don't know);
- They were asked whether they have one or more sites that they visit every day (yes, no, not often);
- They were asked what persuades them to browse a website (the website, title and content and the two purposes);
- They were invited to give a Likert scale response that described their interactions with ten suggested sites and social media as online social, cultural and political interactions (see appendix B, p, 337-349).

4.5.10 Section (D): online daily interactions and the potential development of a new society

This section was designed to gather data information to achieve the fourth objective, which seeks to explore the argument that the Internet has a role in society through users' online interactions and to assess users' online behaviour and opinions and feeling about the Internet in order to discover to what extent they are happy and to what extent the Internet influences their lives (see chapter 1, section 1.6).

Three Likert scale questions were used. These sensitive questions elicited opinions on social, cultural and political factors of Internet use.

- Participants were asked to rank six kinds of interaction behaviours with Internet content by degree ('strongly disagree', 'disagree', 'neither agree nor disagree', 'agree', 'strongly agree').
- Participants were asked to give their opinion about the Internet and their Internet use by ranking ten proposed opinions ('strongly disagree', 'disagree', 'neither agree nor disagree', 'agree', 'strongly agree').
- Participants were asked to describe their feelings about ten proposed social, cultural and political factors ('strongly disagree', 'disagree', 'neither agree nor disagree', 'agree', 'strongly agree') (see appendix B, p, 337-349).

The four questionnaire sections discussed above are summarised in Table 4-2 below.

Table 4-2: Survey questions sections design

Section	Scheme	No. of questions
Basic information	Gender / age / location	4
Section A	Information about level of Internet use and users' experience	8
Section B	Purposes of Internet use and gratifications	2
Section C	Anticipated social, cultural and political impacts of Internet use	5
Section D	Online daily behaviour, interaction with content, users' opinion and feeling and the potential development of a new society.	3

4.5.11 Language of the questionnaires

To ease the participants' understanding, the questionnaires were translated from English into Arabic, taking careful attention to ensure their accuracy. The translation took care to convey the whole meaning in relevant Arabic expressions, because 'shorter questions guarantee higher completion rates' (Wimmer and Dominick, 2011, p.199). The questionnaires were checked by two Arabic-speaking academic professors, Dr Muktar Arishia, a member of the Media Department at Leicester University and a Media Professor at the University of Tripoli, and Dr Hasan Omar, a professor in the

social science Faculty at Azzawya University. The time taken to complete the questionnaire was also tested; it was found to take an average of 50 minutes, an acceptable length for avoiding the impatience of young people (Oppenheim, 1992, Kumar, 2005, Dominick and Wimmer, 2011): 'the maximum time limit for self-reported questionnaires in a group situation supervised by research is 60 minutes (Wimmer and Dominick, 2011, p.200). The questionnaire was written to be simple and clear and was guided by the terms used by the UK Telecommunications Regulator, (Ofcom 2007a, 2007b). It was kept as short as possible to ensure a higher rate of response (Wimmer and Dominick, 2011, p.199). Finally, the writing of the questions was clear, and it was printed using high quality print and paper.

4.5.12 Pilot study

In order to ensure further clarification about the wording of the questionnaires, a pilot study was conducted, which played an important role in the development of the questionnaires (Dillman, 2000). It helped to ensure that the survey design matched the research objectives, and the phases of study were piloted to identify any defects (Collis and Hussy, 2003, Saunders et al., 2009). Pilot testing is a means of assessing the questionnaires or measuring instruments to be used in a survey or experiment. It is important and difficult at the same time, as Berger (2000) emphasised that:

> Piloting of drafts of questionnaires on samples which are representative of the target population is essential both to gauge the length of time which it takes and to investigate whether the questions are properly understood by the respondents. (Sapsford and Jupp, 1996, p.102)

Furthermore, to ensure that the respondents have no problems answering the questions, a pilot is needed to check these questionnaires and also to correct any potential difficulties. Moreover, the use of a pilot ensures that essential elements are evaluated, including reliability of the questions, whether the respondents might encounter any difficulties in answering them, how long they might take to answer them, whether the language is simple and whether the layout is attractive and easy to understand. Five pilot studies were undertaken:

1. First pilot: an early draft in English was designed and tested in a small pilot study with 25 Sheffield Hallam University students in the library on Tuesday 4th December 2012 in order to investigate the respondents' reactions, how far they understood the questions and whether there were any misunderstandings or confused meanings.
2. Second pilot: a second draft was designed in Arabic and tested on 20 Libyan students in the UK on Monday 10th December 2012. They were invited to make comments about any of the questions, response options and routing instructions (Barce, 2008). They were invited to answer the questions and were also asked to indicate any difficulties they found regarding the meaning, classification or order of the sections.

3. Third pilot: this study was conducted in the Art Faculty at Tripoli University, with the help of the faculty staff, to test the faculty's ability to administer such a survey. It surveyed 25 students divided by gender in the Literacy Faculty of Tripoli University in Libya on 24th December 2012. It tested the relevance of the questions, the ability of the respondents to carry out the survey and their ability to understand the questions. They were asked to note any difficulties in meaning, classification, and context or question design. The testers ensured that the surveys lasted between 25 to 35 minutes and that no survey draft was left without responses. Some of the questions were subsequently modified for words, sentences and order in response to the results of this pilot test in order to ensure that the participants completed it easily and with satisfaction (Drever and Munn, 1999, Bell, 2005).
4. Fourth pilot: after three pilot test studies had been conducted, a final draft of the questionnaires was checked by Dr Muktar Erishia, a professor at Tripoli University, and Lecturer Hassan Omar Saied, a professor at Azzawya University (see Appendix E, p, 354). Both researchers are academic experts who gave feedback on the translation, the relevance of the questions to the project's aims and objectives and any ambiguity, to ensure clarity, validity and consistency. As overall feedback, all the comments from the previous four pilots, including the ones in English, were checked carefully to avoid confusion, changes in the meaning caused by the translation and ambiguity. The time it took to complete the questionnaire was tested, and the clarity of language and questions, the questionnaire's order and that there was sufficient coverage of the study's objectives and aims were ensured. As a result of these tests, certain changes were made in order to ensure that the fieldwork was as reliable and valid as possible.
5. Fifth pilot: an online survey pilot study was conducted by sending a survey website link to 20 participants by email and posting a comment survey Website link on the university's closed Facebook group, after seeking approval from the administrators. This was to examine online survey work and evaluate the process by receiving feedback about the use of emails and Facebook to conduct the online survey. This pilot study was carried out from the 20th to the 27th of December 2012, and the aim was to evaluate the difference between sending a survey in emails and seeking comments on closed Facebook groups, and how long surveys distributed by these methods would take to complete. The responses showed important differences between surveys carried out via these two methods. Email produced a much lower rate of response of only 3 out of 15, giving a response rate of only 20%. On the other hand, the survey which invited comments on the university's closed Facebook group page was answered by 13 out of 15 respondents, giving a response rate of 80%. The measurement of responses to this online survey was done in two ways: firstly, whether the participants completed and answered all the questions and secondly how long they took to answer the

questions from the time of sending to the time they submitted the completed survey online. Using the Libyan university's Facebook group helped to make connections with university students, particularly because there were significant difficulties obtaining students' email addresses because there is no university email system in Libyan universities. The online survey link was posted on both universities' Facebook groups, and the survey page was checked every day to judge progress.

The key changes result from these pilots concerned the questionnaire's design and numbering system. Also, the order of questions was modified to be clearer. Some questions were made simpler, for example, the first section was changed to start with computer ownership and then asked participants whether they used the Internet at home. The paper orientation was also modified to avoid using too much paper.

4.6 The study sample design

In order to obtain meaningful and appropriate data, samples have to be designed by considering the type of study. The research aims, and objectives determine the nature of the target population, which is a set or subset of entities that comprise the group we are interested in (Creswell, 2003). It is also a kind of population which is defined as a full set of cases from which a sample is taken (Saunders et al., 2009). At the stage of the study process, the target population was decided, and the selection of sample was important. According to Walliman (2006), the first stage of sample design is to define the study target population, which is a collective term used to describe the total study society. The sampling method is important to achieve the goals of the research. It is decided by listing the research goals, identifying a potential sampling group to achieve those goals, testing the ability of each method and then choosing appropriate methods that best achieve the study's aims. Intentional sampling was adopted to ensure that the participants represented the study population.

4.6.1 Constructing the sample of university students

In constructing the most representative sample possible of Libyan university students, a number of issues needed to be taken into account, both academic and practical. The optimum sample would be a structured random sample that was large enough to deliver results of reasonable statistical significance – usually around 1000 respondents to deliver 95% reliability for simple measures. Unfortunately, constructing such samples is highly challenging and resource intensive in developing nations. Such samples require detailed knowledge of the overall population to be sampled (working universe) to allow the construction of accurate lists from which participants can be randomly selected. The circumstances of this project meant that such data was not available and the practical circumstances of a country that was in the initial stages of a civil war also made collecting such data impossible (see chapter 2 sections 2.2.9 and 2.2.10).

As with all research, a set of practical solutions had to be undertaken. First, as noted in Table 2-2 (see section 2.2.7 page 24), Ministry of Education data indicates that over 90% of young people (aged 18-20) attend a higher education institution. The research was also concerned with issues of location (urban and rural) and gender. The lack of accessible detailed state or commercial demographic data and lists required that a purposive approach to sampling be taken. To construct a reasonable basic purposive quota sample the research selected two major higher education institutions and sought to recruit a substantial number of respondents who were broadly representative of the constituent student populations. This approach sought to maximise the representativeness of this purposive quota sample by accessing locations where the majority of university students could be found across the key variables.

The choice of a sample based on these factors is explained by three reasons:

1. The first reason is that university students represent a substantive part of young people according to area of residence, and the majority of young people aged 18 to 25 in Libya are studying in higher education (UNESCO, 2013). According to Foot and Sanford (2004), student samples are inherently biased in age, ethnicity and social class, experience and intellectual ability, students are available in abundance and are accessible and highly convenient to use. Moreover, '70 per cent of perception and cognition studies employ universities or college students as participants and two important reasons are given for use of university students; the first concerns validity and generalisability' (Foot and Sanford, 2004, p.256). There are other factors which lead to the choice of research sample that are linked more carefully to the aims, objectives and study questions. According to Yates (2003, p.25), there are two purposes of choosing samples: you can observe a case related to your study or rate of sampling which ensures that it will be representative. Thus, the study aimed to produce purposive samples drawn from two major universities in Libya, Tripoli University, based in an urban area, and Azzawya University, based in a rural area. This type of sampling was most appropriate in this study as it represents university students aged between 18 and 25.
2. The second reason for the choice of sampling was the Libyan civil war, which made ensuring safety a key concern. The majority of Libyan universities have problems with security and most have suspended their courses (Al-Jeheimi, 2015, Al-Jazeera, 2015, Volkmann, 2015).
3. The third reason for conducting this research from abroad is that it needed to have relationship with some universities in Libya to conduct paper surveys. Because it was difficult to travel to Libya during the time of war civil (see chapter 2, section 2.2.9/ 2.2.10). The researcher's personal relationships with Tripoli and Azzawya Universities were exploited (where the researcher had been a lecturer and had good relationships with the faculties and departments).

4.6.2 Tripoli University, the urban area

Tripoli University is the biggest university in Libya and is situated in Tripoli, which is the Libyan capital and has the largest urban population in the country. It was founded in 1954 with the opening of the science faculty and in 1966 it added the agriculture faculty; there are now 21 faculties with a total of 43,258 students. There are three important reasons for choosing Tripoli University as one of the study societies for this thesis. First, it has the largest number of students and the majority of faculties are in the same area. Second, it represents a sample from the urban capital of the country. Third, the researcher has a good relationship with the university staff having been a lecturer at the university from 1998 to 1999. This helps in conducting the surveys, because the staff agreed to monitor the surveys' completion. This relationship with colleagues in Libyan culture and society is important to ensure that the university staff are interested in being involved in the surveys and ensuring academic rigour during the entire process.

4.6.3 Azzawya University, the rural area

Azzawya is one of the biggest rural universities, which has faculties in more than ten small other cities and towns in the west of Libya and on the coast. It was founded in 1988 with the opening of 32 faculties in 8 small cities and towns – Azzawya, Sabrata, Sarman, Zwara, Ejmaael, Yefren, Regdaleen and Zoulton – and it currently has a total of 42,000 students. Those small cities and towns are situated in the west of Libya from Tripoli to the Tunisian border and others in the south-west on the West Mountain. There are three reasons for choosing this university. First, it represents the rural sample area and the majority of students could give a good sample of young rural Libyan people. Second, the other rural universities are far away from the Libyan capital and at the time of the civil war it would be difficult to deliver surveys to places more than 500 kilometres away from Tripoli. This led to the researcher to choose the nearest rural university to Tripoli. Third, the researcher has a good relationship with the university having lectured there from 2004 to 2006. As noted above, such relationships are important.

4.7 Structure of the sample

The sample population was therefore defined as Libyan university students split by different genders and locations aged between 18 and 26. The structure of the sample considered the study variables and avoided any disadvantages. It aimed to sample 900 students divided between the two universities, which were categorised by area, and their faculties were sorted according to gender.

There are advantages in choosing intentional samples based on academic faculty departments through lecturers and professors.

- Universities are societies of young people who are readily available to participate.

- It can ensure a sufficient number of responses with proportionate representations of both genders.
- It can ensure the seriousness of the respondents in answering the questionnaires.
- It can avoid negligence or problems that are expected to occur as a result of the Libyan situation after the revolution.
- It is the best way to conduct a survey from far away, and especially when the researcher cannot travel or ensure his personal safety.

According to Gillham (2000), there are no problems with literacy level if the study is focused on university students. Due to the Libyan situation after the revolution, it is unsafe to conduct a survey in the street because militia and individual behaviour might affect the ethics of the respondents and endanger the researcher's life. At a time of social division with regard to Internet use, the closed Facebook university groups helped to make connections with university students and to survey them more easily.

4.7.1 Sample size

In selecting the sample, this study used a procedure to maximise the sampling from which the main samples and representative society could be studied. This considers the aims and objectives of the study in order to identify the target population from which the study wishes to generalise the results of the analysis. Kothari (2004) noted that the research population represents the collection of issues around which the researcher desires to draw the results. Moreover, the size of the sample is important in achieving statistical significance; it reduces errors in generalising to the larger population. Sampling aims to draw certain individuals from a type of population in such a way as to allow for an overview of the phenomena of interest from that sample (Saunders et al., 2009). According to Malhotra (2009), the sampling process should be representative of the study society from which the sample is taken. Where the study society is large, the researcher has insufficient time or human resources are limited, sampling is used to investigate features of that population.

It was felt that the sample of students would be excellent if it involved 1000 participants, very good with 500, good with 300, poor with 200 and very poor with 100 (Wimmer and Dominich, 2011, Comrey and Lee, 1992, cited in Wimmer and Dominick, 2011, p.103). Moreover, student samples might work when they involve between 100 and 300 participants (Hansen et al., 1998, p.243). The current research aimed to investigate a sample of around 900 students from both universities by using both paper and online surveys.

The study was keen to choose a number of sample participants that satisfied the research aims and objectives and complied with the conditions of the methodology, and the samples for both the paper and online surveys totalled 861 participants. The surveys were completed according to the following criteria. First, during the time of the study there were 43,258 students at the University of Tripoli and

42,000 at the University of Azzawya. The study construction used intentional sampling divided between the genders at both universities. Second, for the paper survey participants, the study aimed for a total of 400 students, with 200 from Tripoli University (50% of sample) and 200 from Azzawya University (50% of sample). This is a reasonable participant size from which to collect the main data and was collated with the online survey sampling number. The papers surveys were given to 178 participants from Tripoli University and 94 from Azzawya University; they were chosen intentionally by faculty at these universities to obtain an adequate number of participants at the time of the study, (see table 5-2 in chapter 5, section 5.2.2, p, 137).

Third, for the online survey, the study aimed to have 800 responses, which, when combined with the paper survey data, would provide an adequately large sample size. A total of 588 respondents were surveyed online between July and September 2013, 247 men and 341 women, 372 from Tripoli University and 216 from Azzawya University (see Table 5-3 in chapter 5, p, 137). However, in total there were 362 male participants and 499 female participants, to a total of 861, which is considered in the range of being a "very good representation" following Wimmer and Dominich's classification (2011) (see Table 5-4 in chapter 5, p, 138). The first study variable investigated the place of residence of the respondents. 64% were from Tripoli University (urban areas), while 36% were from Azzawya University (rural areas). For the second study variable of gender, 42% of the respondents were men, while 58% were women. The age range of the respondents was from 18 to 26 years old, and the median age of the sample was 22 years old.

4.7.2 Procedure

The questionnaire was accompanied by a letter that was sent to the universities and faculties to explain the motivation of the study and the desire to obtain an equal number of men and women students from a cross-section of faculties and year groups. Moreover, the survey questionnaires included a covering paper that stated that any answers to the questionnaire would only be used for academic research, that the whole process would be anonymous and that the survey was monitored by departmental and academic staff. The paper survey was conducted on Wednesday 22nd and Thursday 23rd May 2013 at Tripoli University and on Tuesday 28th and Sunday 12th May 2013 at Azzawya University (Sunday is a working day in Libya) (see appendix F, p, 355-356). The online survey was open for around 30 days to allow comments on the link on the universities' closed Facebook groups from the 1st to the 30th of June 2013.

The questionnaires were typed and printed in the UK and sent to the departments at Tripoli University and Azzawya University, which accepted responsibility for monitoring the survey under academic conditions. Each questionnaire included on the first page some brief information about the aim of the study and how the participants could complete it. The average time spent on the questionnaires was between 25 and 35 minutes within lesson time, and the responses were collected by academic staff,

collated and delivered to the researcher. The survey data was downloaded and analysed using SPSS software.

4.7.3 The process of data analysis

The SPSS software program is frequently used in the social sciences to analyse survey and interview data (Hinton, 2004, pp. 242-356). The statistical analysis of the questionnaire data was conducted using SPSS versions 16.0 and 18.0. Both the paper and online survey data was computed by using a multiple series of discrete variables based on the aims and objectives of the study. The data was coded, entered, cleaned and transformed in order to be input into the statistical package. The analysis of the data involved four levels. The first investigated the demographic data. The second level explored the first research question related to the use of the Internet. The third investigated the gratifications obtained by using the Internet. The final level analysed young people's feelings and how they viewed the Internet in order to measure the variable of influence and discern what their typical online consists of. Rich, detailed and in-depth information is presented by this analysis to present an overall picture of the influence of the Internet on young Libyan people's lives.

4.8 Complementary qualitative data collection

The complementary method included qualitative interviews and a thematic documentary reflexive journal analysis to provide further data for interpretation. This method functions as a form of complementary data gathered to enable comparison with the conclusions of the main quantitative data. Interviews are a useful way of producing data based on information priorities, ideas and opinions. They can be conducted with people or groups of individuals either face-to-face or online screen-to-screen, can helps to address the study's aims and questions and are especially useful for producing data that is related to details of the study revealed in the quantitative data (Collies and Hussey, 2003).

4.8.1 Interviews

The research conducted interviews with media experts such as researchers, professors and journalists, and with the parents of Libyan students in the UK. It aimed to collect in-depth data to understand the influence of the Internet on young people's lives and the emergence of a new society. These respondents produced complementary information about young people's use of the Internet, and what experts and parents considered significant about it. A pilot test study was carried out using the complementary online interview questions. This was checked by Professor Mohamed Al-Asafar, a Media Studies Professor at three Libyan universities and the Head of the Department of Media Studies at Az-Zetona University in Libya (see Appendix E, p, 354). The aim of this study pilot was to ensure the clarity of the questions and that they were relevant to the study variables and factors.

Samples and the study society of the media experts and parents interviewed

The participants were divided into two groups to form a purposive sample. First, the researcher aimed to interview 5 media experts such as media professors, and journalists online by chatting on Facebook. Ten such interviews with media experts, including journalists and researchers, were actually completed. Second, a group of five parents of Libyan university students were interviewed with face-to-face questions.

Face-to-face interviews with parents based in the UK

The first group assembled consisted of parents of Libyan university students who live in Sheffield, UK. It was conducted within the same administrative guidelines as the survey according to the study's complementary method design. The five interviews were intended to provide an alternative perspective on the purposes and gratifications of Libyan university students' Internet use and on their online behaviours and relationships with offline society. The interviews were conducted on the 4th, 11th and 18th January 2014, when the parents were available. Five questions were put to them:

1. Do you have an Internet connection at home?
2. Do you support your son / daughter in using the Internet?
3. Do you monitor your son's / daughter's use of the Internet?
4. Do you think that the Internet is important in your children's lives?
5. Do your children attach special significance to the Internet?

Each interview started after confirming that the participants agreed to be interviewed for the study aim, and an appointment was fixed so that all concerned were ready to start the interview. Each interview lasted 25 to 30 minutes and was conducted at the Libyan School in Sheffield.

Online interviews with media experts

The second type of interviews were conducted online with five Arab and Libyan media experts, who were interviewed on Facebook chat, a two-way interactive connection over the Internet, between the 20th and 24th of January 2014. Each interview lasted between 25 and 30 minutes. Ten media experts, including university professors, researchers and journalists, were interviewed and answered questions related to the research aims, objectives and topics. These online interviews explored ideas about the development of the use of the Internet and its impact on society, and especially on young people's lives. Each session was recorded digitally for playback and later transcribed using PDF files which were also used for coding and compiling. Seven questions were asked:

1. Do you think that young people rely on the Internet to obtain new information?
2. What is your expectation about the purpose of their online navigation?
3. Do you think that the Internet affects young people?
4. What kind of role does the Internet have in university students' lives?
5. What do you think about the Internet's role in society?

6. Do you think that the Internet makes young people remote from society?
7. Do you think that the Internet is leading to the emergence of a new form of society?

4.8.2 Thematic analysis of articles relating to media coverage of the impact of the Internet on Libyan and Arabic societies

In order to further triangulate the findings of the survey and interview work a thematic analysis was conducted of contemporary media articles that discussed similar topics to the thesis. Given the challenge of the civil war in Libya at the time, it was not possible to undertake any qualitative interviews in the country. This had been the original plan. As a substitute for this, having taken advice from both supervisors and annual reviews, the project examined a set of contemporary media articles of Arab and Libyan origin that explored the issue of the social and personal use of the Internet in Libya. Nine articles were identified. It was hoped that this would provide some insight into the broad themes prevalent in Libya public debate at the time.

These were examined for key words relating to the aims and topics of the current research, such as "young people and Internet use", "especially young people's society". Miles and Huberman (1994) highlight the flexibility of this approach, which can cope when data has to be collected at different times or separately. Nine articles were classified by narrowing down the focus. The articles, three international, three Arabic and three Libyan, were analysed by coding categories of data into themes which could be displayed and classified according to their differences and similarities (Miles and Huberman, 1994). The analysis was done by coding, using categories and noting patterns. Furthermore, in order to create a reasonable and logical chain of evidence, the analysis considered the relationships between the identified factors and variables (Miles and Huberman, 1994, Braun and Clarke, 2006, Creswell, 2009).

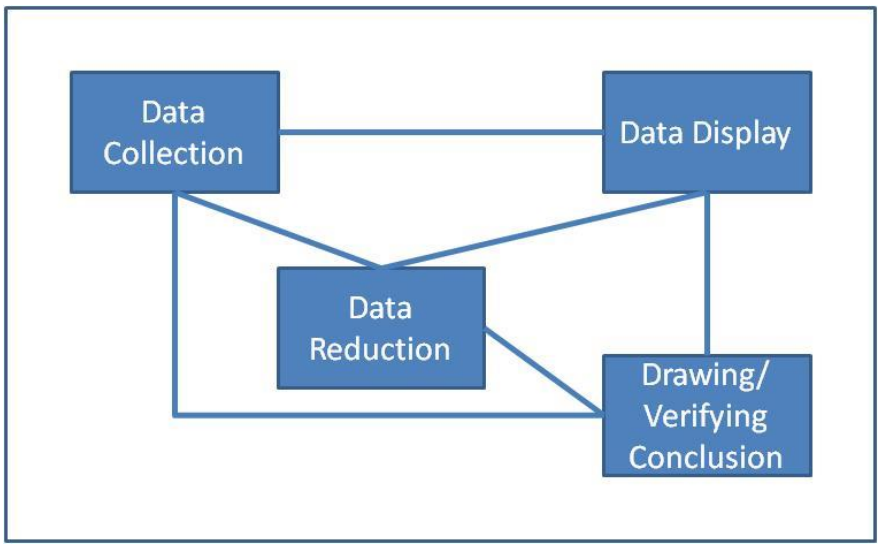
4.8.3 Qualitative data analysis

The methods used to interpret qualitative data are different to those used in statistical research because of the nature of the data, which requires a more appropriate analytic tool. Saldana (2009) argued that, in qualitative analysis, coding is the most important process. Coding converts words and short phrases into symbolic summative, essence-capturing salient and evocative attributes as a means of finalising the language used by the participants. Qualitative data analysis has been described as a cyclical process in which the data collection influences the data analysis (Powell and Cannaway, 2004). Moreover, Cohen et al. (2007) selected thematic analysis involving coding and data categories as a method for collecting and gathering data which involved use of coding and data categories. Qualitative analysis is different from a statistical quantitative approach because it can be richer and deeper. It involves not only coding and categorising: it is a way of comparing and identifying links between the data and theoretical contexts (Cohen et al., 2007).

The data analysis from the interviews was completed first by reading all the answers and then by listening to the recordings and reviewing the transcripts of the interviews. Second, the data were reviewed, classified and organised into categories to enable preliminary coding. Third, the researcher went through the spoken and written answers and compiled the related data labelling for each code cluster according to its characteristics. Fourth, the researcher identified answers that related closely to the primary categories and correlated them with the quantitative results. Fifth, all the categories were classified according to the aims of the interviews and divided by variables and study factors, which helped to review the coding of the answers by referring to the transcripts (Dornyei, 2007). This was done to ensure that the variables and study factors were represented in the codes, improving the results' accuracy. Lastly, the codes were arranged into themes to be analysed, this was done by classifying them into categories with similar features based on the findings from the relevant literature and content analysis.

Thematic data analysis was adopted by Miles and Huberman (1994) as a model. Following data collection, this model has three streams or stages, including data reduction, data display and drawing and verifying conclusions from the data (see Figure 4-1).

Figure 4-1: Model of the thematic analysis process (Miles and Huberman, 1994, p.12)



The theme represents a level of patterned response located in the data that is related to the study question. The themes were given different codes and several texts were recommended and coded by categories. The code is a label which identifies particular pieces of data that contribute to a theme. The analysis is based on memos, which are useful for reflecting on emergent patterns, themes and concepts by finding connections between themes which are incorporated into the final report results. Thematic analysis can be linked to the study variables and sub-variables to support the main data collected and to enable further explanation and interpretation of factors. The process went through six phases in a gradual process of familiarisation with the data and included a reflexive journal that gave

representations of each code and how the code was established (Saldana, 2009, p.18). The six phases were:

1. Becoming Familiar with the Data
2. Generating Initial Codes
3. Searching for Themes
4. Reviewing Themes
5. Defining and Naming Themes
6. Producing the Report

4.9 Ethical considerations

In any research process, ethical consideration is critical and proper (Bryman, 2008). Researchers should maintain high standards by ensuring the accuracy of data, and they have to protect the confidentiality of the participants (Zikmund, 2003). According to Zikmund (2003) and Bryman (2008), participants and individual organisations are the subjects of the first stage in research ethics, for the aims to eliminate any disadvantages which might affect the study results and it should be avoided. Ethical approval was granted by Sheffield Hallam University as part of PhD process (RF2 PhD confirmation report on the date 1st October 2013). In order to ensure that the questionnaires were completed within the universities' ethical requirements, prior to any further large-scale pilot study taking place, it was necessary to ensure that the survey complied with the universities' ethical requirements because human research subjects were involved. To ensure greater accuracy, all the questions included an introduction and a description of the nature of the subjects. Each section also had an introduction and an indication of the importance and aim of the study section. For the paper survey, participants were allowed to ask if there were any points that needed clarification while they were answering the survey questions to ensure that they understood the questions and answered with ease and convenience. The professors who were supervising the questionnaires in both Tripoli and Azzawya universities sought voluntary participants who would be free and relaxed when answering the survey questions and explained to them the purpose and motivation of the research.

Ethical research was defined by Wellington (2000, p.54) as 'ethics usually refers to the moral principles, guide conducted, which are held by a group or even profession'. With the qualitative approach, ethical considerations were taken into account when choosing the most appropriate interviewees who could give relevant data. The interviewees were not asked about any sensitive political or personal issues, and they were told that their answers would be used only for the purposes of academic research. The anonymity and confidentiality of the information given in the interviews were ensured. The researcher gave all the participants important information about the subject, aims, objectives and nature of the study. This included the purposes of the study, the requirements of the

interview, the questions that would be asked, the anonymity of any information obtained. It was ensured that all the respondents were happy to participate. In this way, it was ensured that the research adhered to 'the principle of voluntary participation which requires that people should not be coerced into participating in research' (Adekeye, 2011, p.34).

The researcher's personal relationship with both universities helped to receive permission and agreement from heads of department at both universities regarding the supervision and surveying of students during study time. The researcher was very careful to ensure that the guidelines of the survey were attached to the copies that were sent to the universities. These described the aims and objectives of the study, the target sample and the survey process, as well as how long the survey should take. The students were given a printed paper that included details about study aim, objectives, and type of samples used in the investigation in their classes. They were informed by their professors of the aims of the research and of the subject being investigated. They were given an idea about the investigation process before the survey was distributed, they were made aware that no personal names or addresses were required, and they were also informed that any data gained from the survey would only be used for academic research purposes and would not be used for any marketing or other proposes. For the online survey, the respondents were also given a description of the study and, to reduce the possibility of psychological harm to subjects, they were allowed to skip any items they did not want to answer. Moreover, each page of the survey included the option of withdrawing from the survey and a reassurance that no information would be gathered other than that provided voluntarily.

4.10 Chapter summary

This chapter has explained in detail the study methodology adopted in this research. It adopted an interpretive research paradigm using a mainly quantitative approach followed by complementary qualitative methods. It also presented and discussed the research design which enabled the researcher to collect data from Libyan university students who formed the study society, representing young Libyan people. The study used an intentional sample of university students and used paper and online surveys to collect the main data using three types of questions. These included the 'Yes/No and I don't know' type answers with optional choices and Likert scale answers. Moreover, the study adopted the complementary qualitative methods of interviews with the parents of Libyan university students and media experts such as professors, as well as the thematic analysis of relevant journals. The questionnaire instrument and the collection and delivery of the survey was piloted and pre-tested. The rate of survey response was 90%, which exceeds what is considered an adequate response rate. The thematic analysis of journal articles was correlated with the data to provide further in-depth analysis. These allow the rationale of the study design selection to be evaluated. Finally, key matters relating to reliability, validity and ethics were considered and reviewed. The next two chapters would discuss the data analysis and answer study questions by presenting the data collected.

Chapter 5: Internet uses and gratifications

5.1 Introduction

This chapter and the next chapter present the analysis of main data and supplement it with the data derived from the interviews and the thematic analysis, noting where there are areas of agreement and difference. Each analysis chapter has two sections focused on the study objectives and questions. This chapter presents the data analysis in two objectives:

- To survey university students' use of the Internet and describe any differences between urban and rural areas and between the genders. The chapter examines use and experience, includes computer ownership, use rate, time spent online and place of connection, and it also examines any difficulties associated with or obstacles to Internet use.
- To ascertain the respondents' motivations for using the Internet and the social, cultural, and political needs they gratify online, again describing any differences between urban and rural areas and between the genders.

For those two objectives, this chapter would present an analysis of the data as classified below:

1. Analysis of details of basic findings and results, including respondents' demographic information: age, gender and location.
2. Analysis of data and findings are divided into two main sub-sections:
    a) Section 5.3 provides an analysis of the level of Internet use and measurement of Internet use experience.
    b) Section 5.4 provides analysis of motivations of Internet use and needs that are gratified thereby. This includes details of online interactions, favourite sites, elements that persuade users to browse a site and social media navigation.

This analysis is discussed in the context of previous studies described and with reference to the framework theories outlined in the literature review chapter 3.

5.2 Basic details of the findings and results

The basic data describes the participants' backgrounds based on three factors:

- General participant age range, including year of study
- gender
- Area of residence

5.2.1 Demographic profiles of respondents

Table 5-1shows the age range of the participants. The age range of the respondents was from 18 to 26 years old, and the median age of the sample was 22 years old. As can be seen, 47.2% of the sample were 18-20 years old, 34.6% were aged between 21 and 23, 18.0% were 24-26 and only 0.3% were older than 26. According to UNESCO, (2013), (see Table 2-2, section: 2.2.7) 73.48% of young Libyans aged between 15-24 years old attend universities and higher institutional study programmes; 74.47% of women and 72.05% of men are in higher education studies.

Table 5-1: Age of sample

Age	Number of cases	Percentage %
18-20	406	47.2
21-23	296	34.6
24-26	155	18.0
Older than 26	4	0.3
Total	861	100

5.2.2 Details and total of samples

The data is presented in tables to facilitate comparison. Table 5-2 and Table 5-3 below show the locations, numbers and gender divide of the paper and online survey samples.

Table 5-2: The sample of the paper survey

Paper survey			
Number of cases	Men	Women	Total
Tripoli University / urban	72	106	178
Azzawya University / rural	43	51	94
Total	115	157	272

The paper survey was conducted on Wednesday 22nd and Thursday 23rd May 2013 at Tripoli University and on Tuesday 28th and Sunday 12th May 2013 at Azzawya University (Sunday is a working day in Libya) (see appendix F, p, 355 - 356). A total of 272 respondents were surveyed by paper in Tripoli University on 22nd – 23rd May 2013.

Table 5-3: The sample of the online survey

Online survey			
Number of cases	Men	Women	Total
Tripoli University / urban	157	215	372
Azzawya University / rural	90	126	216
Total	247	341	588

The online survey was open for around 30 days to allow comments on the link on the universities' closed Facebook groups from the 1st to the 30th of June 2013. A total of 588 respondents were surveyed; 247 men and 341 women, 372 from Tripoli University and 216 from Azzawya University.

The total number of respondents (see Table 5-4) for both paper and online surveys was 861 students, 362 of whom nearly 42% were men, and 499 of whom nearly 58% were women. 551 = (64%) were from Tripoli University, the urban area. These comprised 26.5% men and 37.5% women of the total number of respondents. Furthermore, 310 = 36% of respondents was from Azzawya University, the rural area; these comprised 15.5% men of the total number of respondents and 20.5% women of the total number of respondents. Therefore, this total of 861 respondents is considered in the range of being a "very good representation" following Wimmer and Dominich's classification (2011).

Table 5-4: Total of sample's number and categories

Details	Men	Women	Total
Tripoli University Urban area	229 = 26.5%	322 = 37.5%	551 = 64%
Azzawya University Rural area	133 = 15.5%	177 = 20.5%	310 = 36%
Total	362 = 42%	499 = 58%	861 = 100%

In answering the study's basic questions, we can conclude that:

- The participants are aged 18-26, and only 0.3% are older than 26.
- There were more female than male participants.
- Participants from Tripoli University, the urban area, were 64% of the total sample, there were more women than men in this group.
- Participants from Azzawya University, the rural area, were 36% of the total sample, and again this group contained more women than men.
- The total number of participants was 861, all Libyan university students from Tripoli and Azzawya universities.

5.3 Levels of Internet use and measurement of use experience

This section describes the Internet use of Libyan university students, according to gender and area of residence. The analysis measures and compares Internet use, access; time spent online, the location of access and obstacles to Internet use. This analysis of the main data is complemented with the results of the qualitative analysis from the interviews with parents and media experts. In the literature review chapter, it was argued that the use of the Internet has significantly increased in societies (Aslanidou and Menexes 2006, Koc, 2007), and it was noted that Arab society has shown a similar increase in Internet use and that Arab society restricts the freedom of women (Elsafty, 2005, The Silatech Index, 2010, Shen and Shakir, 2012).

Use and gratification theory is applied to improve our understanding of both Internet use and online behaviour (Eighmey and McCord, 1998, p.187-94, Korgaonkar and Wolin, 1999, p.53-68). Rice and Williams (1984) noted that use and gratification is one of the mass media theories that has promise as

a tool for analysing new media, and other authors have argued for the suitability of use and gratification in analysing the new media (Newhagen and Rafaeli, 1990, p.4-13, Williams, Strover and Grant, 1994, p.463-482, December, 1996, p.14-38, Morris and Ogan, 1996, p.39-50). This analysis would answer RQ1, RQ2 and RQ3 research questions and is presented in sections: owning computers, measurement of use of the Internet, average weekly and daily use, obstacles to gratification of needs online, kind of connection and Internet use obstacles.

5.3.1 Ownership of computers in society

The survey aimed to measure the digitisation of society using the indicator of how many Libyan families own a computer, which was assessed by Question 1. It was found that 93.5% of the sample owned a computer, and only 6.5% did not. Home computer use might indicate Internet access, which can also occur at university, in a cybercafé or through a mobile device, but levels of home access do indicate the extent to which computers have entered the domestic rather than work or educational context. Moreover, computer technology facilitates communication as a means of Internet connection which is considered as 'synchronous or asynchronous electronic mail and computer conferencing by which senders encode in text messages that are relayed from senders' computers to receivers' (Walther et al., 1992, p.52). It helps people to go online easily, and the spread of ICT has improved people's ability to react to new communications technologies (Aibraheem, A., 2008, Abdhear, 2013). According to Romi and Zoabi (2003, p.1), there is 'a significant relationship between owning a computer or using one and having positive attitudes toward it'. In addition, computers allow users to be more active, especially through social media (Zoda, 2011). In the past, computer ownership in the Arab world was noted to be low: 'personal computer ownership rates are relatively low in the Arab world, and because ISP access charges are often high' (Warf and Vincent, 2007, p.37). It is therefore important to investigate computer ownership in Libyan society.

Gender and area difference

The findings did not show gap between men and women in terms of the ownership of a computer: 93.6% of the women and 93.4% of the men owned a computer. Moreover, the results of the computer ownership question show that 93.4% of urban university students own a computer. 93.5% of urban men had a computer and only 6.5% did not. There is a similar pattern among women: 93.4% of urban women own a computer and only 6.6% do not. 93.8% of rural university students owned a computer, with 92.8% of rural men and 94.8% of women owning one.

Table 5-5: Ownership of computers

	Yes %	No %
Men	93.4	6.6
Women	93.6	6.4
Overall	93.5	6.5
Urban sample / Tripoli university		
Men	93.5	6.5
Women	93.4	6.6
Overall	93.4	6.6
Rural sample / Azzawya university		
Men	92.8	7.2
Women	94.8	5.2
Overall	93.8	6.3

A Chi-square test was conducted, and it indicated that gender variables in this case were not significant as the coefficient value was only .016 and the Sig was .891. For the variable of place of residence, the Chi-square analysis showed that the coefficient value for area difference was .19 and the Sig was .891. We can conclude that neither variable shows a statistically significant difference.

Table 5-6: Gender and area Chi: computers ownership.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Computers ownership	.016	.19	1	1	.899	.891

This spread of ITC in Libyan society is also confirmed from the results of Interview with Arab media experts, and one of those noted that ‘owning a family computer is common in Arab society and now some families have more than one computer with personal devices. This is an important factor of ITC and Internet role in society’.

In answering survey question: 1, Table 5-5 shows that:

- Computers as a means of Internet connection are owned by a majority of the respondents from both universities, and there is no statistically significant difference between men and women in terms of computer ownership. The fact that there is no difference between men and women is important.
- There were also no statistically significant differences between urban and rural areas in this regard.
- This also held true when gender was analysed in the context of the participants’ location.

The rate of computer ownership among Libyan university students is remarkably high for both genders and in both urban and rural areas. We can conclude that Libyan university students are using

ICT at the same level and that the rate of adoption for new communications technologies is the same for both genders and in both areas. The 'rate of development of new communication technologies is the way to measure digital divide in Arab countries' (Ali, 2014, p.370).

5.3.2 Measurement of Internet use

The study attempted to assess the use of the Internet by Libyan university students. It found that the overwhelming majority use the Internet, with 98.5% reporting that they used it and only 1.5% of the respondents, all of whom answered the paper survey, reporting that they did not (see Table 5-7). This finding is supported by Abo-Harara (2010) and Ibrahem, M., (2008).

Table 5-7: Use of the Internet

	Yes %	**No %**
Men	98.6	1.4
Women	98.4	1.6
Overall	98.5	1.5
Urban sample / Tripoli university		
Men	98.2	1.8
Women	98.1	1.9
Overall	98.1	1.9
Rural sample / Azzawya university		
Men	98.2	1.8
Women	97.9	2.1
Overall	98.1	1.9

The finding from the interviews with the parents and the thematic analysis support these results. For example, one of the parents said 'we have Internet in our home because children need it for their study and they need to go online every day, the Internet is one of our daily needs as a family' and the thematic article analysis stressed that 'there is an increase of use of the Internet in Arab society and the Internet being one of the daily interactivity' (Ahmed, A. 2014). These supported the finding that young people's use of the Internet has increased in society and that it has become one of their most important daily activities.

Table 5-7 shows that:

- The majority of the samples use the Internet and there is a high rate of Internet use by those students.
- There is no statistically significant difference in level of Internet use between the genders in general or between the urban and rural areas.
- The rate of use was also the same in urban and rural areas.

5.3.3 Experience of using the Internet

Users' experience of using the Internet can be measured by investigating for how long they have been using it. This can indicate users' ability to use the Internet and the extent to which it satisfies their needs and can measure the influence of it. According to Aslanidou and Menexes (2008), the length of time that a user has had access to the Internet is important for understanding the extent to which the Internet affects people's lives. 'The amount of prior experience with the Internet is likely to affect online actions' (Howard, Rainie and Jones, 2001, p.383).

Table 5-8: Experience of using the Internet

	from 1-4 years %	**from 4-6 years %**	**more than 6 years %**
Men	47.2	36.3	22.0
Women	44.1	32.4	23.5
Overall	45.4	34.0	20.6
Urban sample / Tripoli university			
Men	46.3	35.6	18.1
Women	41.9	33.2	24.9
Overall	43.6	34.4	22.0
Rural sample / Azzawya university			
Men	50.1	38.1	11.8
Women	54.1	27.4	19.4
Overall	51.5	33.0	15.5

The findings show that 45.4% of respondents have been using the Internet for 1-4 years, 34.0% for 3-6 years and 20.6% for more than 6 years.

Gender and area differences

The findings showed that 47.2% of male respondents have used the Internet for 1-4 years, 36.3% for 4-6 years and 22.0% for more than 6 years. Similarly, 44.1% of the female respondents have been using the Internet for 1-4 years, 32.4% for 4-6 years and 23.5% for more than 6 years. Moreover, 43.6% of the urban sample has used the Internet for 1-4 years, 34.4% for 4-6 years, and 22.0% for more than 6 years. 46.3% of the urban men have used the Internet for 1-4 years, 35.6% for 4-6 years and 18.1% for more than 6 years. Similarly, 41.9% of urban women respondents have used the Internet for 1-4 years, 33.2% for 4-6 years and 24.9% for more than 6 years. In rural areas, 51.5% of the sample has used the Internet for 1-4 years, 33.0% for 4-6 years and 15.5% for more than 6 years. 50.1% of the sampled rural men have used the Internet for 1-4 years, 38.1% for 4-6 years and 11.8% for more than 6 years. Similarly, 54.1% of the sampled rural women have been using the Internet for 1-4 years, 27.4% for 4-6 years and 19.4% for more than 6 years.

The Chi-square test showed that the coefficient for gender was 5.595 and the Sig was .232. Therefore there is no statistically significant difference between the genders in terms of for how many years they

have been using the Internet. The Chi-square test for area of residence showed that the value of the coefficient was 7.982 and the Sig was .092, which means that there is no statistically significant difference between areas of residence in terms of for how many years the students have been using the Internet.

Table 5-9: Gender and area Chi: experience of using the Internet

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Experience of using the Internet	5.595	7.982	4	4	.232	.092

The finding from the interviews with media experts supports these results. For example one of the media experts said, 'the Internet is being a daily young people activity and they spend more and more time online, it is a phenomenon in young people's life'.

In responding to survey question: 3, Table 5-8 shows that:

- The average length of experience of the sampled Libyan university students using the Internet is quite considerable, with nearly half having used the Internet for 1-4 years, two-thirds for 4-6 years and one fifth for more than 6 years.
- Men and women have similar levels of experience of Internet use.
- There were no statically significant differences noticed between the respondents in terms of area of residence or gender for this question.
- More urban women have used the Internet for 4-6 years than rural women. There were no statistically significant differences between the men in both areas.

5.3.4 Average weekly Internet use

The respondents were asked how much they used the Internet each week. Experiencing Internet use increases users' ability to navigate and browse the Web, which in turn helps participants to be more active and have an easier time online: 'young people (late teens and twenties) have a much easier time getting around online than their older counterparts (whether people are in their 30s or 70s)' (Hargittai, 2008). Young people spend more and more time on online activity (Aibraheem, A., 2008, Aslanidou and Menexes, 2008, The Silatech Index, 2011).

The scale gave the options of using the Internet every day, using it three to five times a week and using it once a week. The findings showed that more than two thirds of respondents 64.0% used the Internet every day, another quarter 26. 9% went online 3-5 times a week, and 9.1% went online only once a week.

Gender and area differences

61.4% of the sampled men used the Internet every day, 31.0% went online 3-5 times a week and 7.6% once a week. Similarly, 65.9% of the sampled women used the Internet every day, 23.9% 3-5 times a week and 8.1% just once a week.

Figure 5-1: Average weekly Internet use

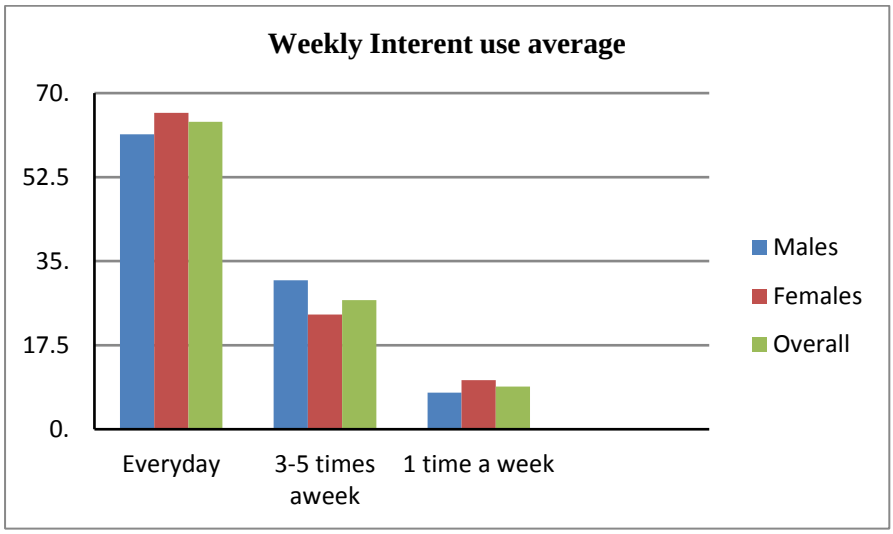


Table 5-10: Average weekly Internet use

	Every day %	3-5 times a week %	Once a week %
Men	61.4	31.0	7.6
Women	65.9	23.9	8.1
Overall	64	26.9	9.1
Urban sample / Tripoli university			
Men	61.4	31%	7.6
Women	65.9	23.9	10.2
Overall	64	26.9	9.1
Rural sample / Azzawya university			
Men	56.7	35.8	7.5
Women	71	20.9	8.1
Overall	63.6	28.7	7.8

Moreover, 64% of the urban sample uses the Internet every day, 26.9% 3-5 times a week and 9.1% once a week. 61.4% of sampled urban men use the Internet every day, 31% 3-5 times a week and 7.6% one time a week. Similarly, 65.9% of urban women use the Internet every day, 23.9% from 3-5 times a week and 10.2% once a week. Among the rural respondents, 63.6% use the Internet every day, 28.7% 3-5 times a week and 7.8% once a week. 56.7% of the sampled rural men go online every day, 35.8% 3-5 times a week and 7.5% once a week. Similarly, 71.0% of the sampled rural women use the Internet every day, 20.9% 3-5 times a week and 8.1% once a week.

When applying the Chi-square test between the genders, the value of the coefficient of the Chi-square is 10.809 and the Sig is .013, which means that there is no statistically significant difference in this variable. As for the area of residence, the value of the coefficient of the Chi-square is .986 and the Sig is .805. This shows that there are no statistically significant differences between the urban or rural samples.

Table 5-11: Gender and area Chi: average weekly use.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Average weekly use	10.809	.986	3	3	.013	.805

The interviews with parents support this finding. For example, one of the parents noted that 'the average of their children's use of the Internet is not weekly but daily and they spend most of their time online when they are at home'. In responding to survey question: 4, Table 5-10 shows that:

- Two thirds of respondents use the Internet every day.
- No statistically significant differences were found between the length of time men and women participants spend online per week.
- No statistically significant differences in the amount of time spent online per week were found between the respondents residing in urban and rural areas, although rural men are slightly more likely to use the Internet every day.

5.3.5 Daily average Internet use

In order to find out more about users' online activity experience, it was also important to ask the participants how many hours they spend online each day (Q5). It needs to be noted that the scale did not include an option to indicate less than one hour spent online each day. This may impact the accuracy of the data here. As all respondents were online, it is assumed that those using the internet less than one hour a day were likely to have selected the '1-2 hour' option. Daily online activity has been considered to be important in people's lives, as noted by Ibrahem (2008), Aslanidou and Menexes (2008) and Koc (2007). The analysis showed that 54.6% of respondents spend 1-2 hours online per day, 22.9% 3-5 hours and 22.6% more than 5 hours. Table 5-12 summarises the frequencies of the stated daily uses of the Internet.

Gender and area differences

57.8% of the sampled men spend 1-2 hours per day online, 20.2% 3-5 hours and 21.9% more than 5 hours a day online. Similarly, 51.9% of sampled women spend 1-2 hours a day online, 24.8% 3-5 hours and 23.0% more than 5 hours. For area of residence differences, 53.6% of urban participants use the Internet for 1-2 hours a day, 24.7% for 3-5 hours and 21.7% spends more than 5 hours a day online. 55.9% of urban men use the Internet for about 2 hours a day, 21.5% for 3-5 hours and 22.6% for more than 5 hours. Similarly, 52.0% of urban women use the Internet for 1-2 hours per day, 26.8%

for 3-5 hours and 21.2% for more than 5 hours. 57.9% of the rural sample goes online for 1-2 hours a day, 16.7% for 3-5 hours and 25.4% for more than 5 hours a day. 63.1% of sampled rural men spend 1-2 hours a day online, 16.9% spend 3-5 hours and 20.0% more than 5 hours. Furthermore, 52.4% of sampled rural women browse the Internet for 1-2 hours a day, 16.4% for 3-5 hours and 31.1% spend more than 5 hours a day online.

Table 5-12: Average daily Internet use

%	More than 5 hours	From 3-5 hours	From 1-2 hours
Men	21.9	20.2	57.8
Women	23	24.8	51.9
Overall	22.6	22.9	54.6
Urban sample / Tripoli university			
Men	22.6	21.5	55.9
Women	21.2	26.8	52.0
Overall	21.7	24.7	53.6
Rural sample / Azzawya university			
Men	20	16.9	63.1
Women	31.1	16.4	52.4
Overall	25.4	16.7	57.9

It is important to note that the questionnaire measure did not offer a 'less than one hour' option; we therefore assume that low levels of use, below one hour, are captured in the 1-2 category. The Chi-square test for gender showed that the value of the coefficient of the Chi-square was 2.890 and the Sig was .409, which means that there was no statistically significant difference. For area of residence, the value of the coefficient of the Chi-square was 7.387 and the Sig was .061, also showing that there was no difference between the urban and rural areas.

Figure 5-2: Average daily Internet use

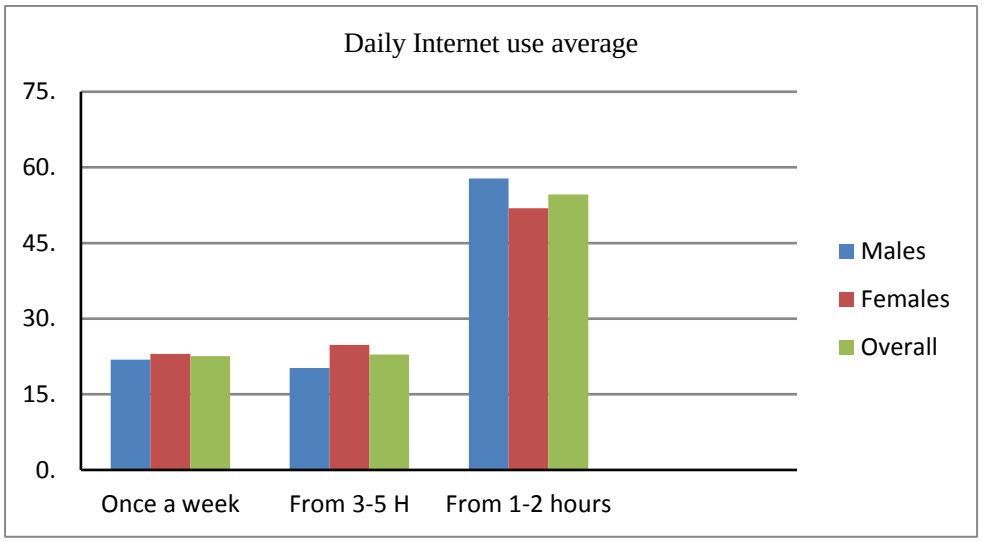


Table 5-13: Gender and area Chi: average daily use.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Average daily use	2.890	7.387	3	3	.409	.061

In responding to survey question: 5, Table 5-12 shows that:

- More than half the sample use the Internet for 1-2 hours a day, a quarter of the sample go online for 3-5 hours a day and a fifth spend more than 5 hours a day online.
- There is no statistically significant difference between the genders in terms of time spent online.
- Both urban and rural areas samples use the Internet the same amount on a day to day basis.
- All of the samples go online every day for at least one hour, which indicates that the Internet is an important daily activity.

5.3.6 Type of Internet connection

Respondents were asked about the kind of connection they use to go online. The options given were home connection, university connection, mobile phone connection or cybercafé. For example, having a home connection gives an idea about the relation between the Internet and a family's living environment and about the spread of the Internet in society, as noted by Aslanidou and Menexes (2008). Home connectivity is increasing around the world, and according to Rainie and Cohn (2014) the new estimates from the 2013 American Community Survey, 84% of U.S. households own a computer, and 73% of U.S. households have a computer with a broadband connection to the Internet, while 70% of Americans have broadband access. On the other hand, according to Barney W., (2013, p. 37), most Arab Internet users rely upon Internet cafes for access rather than individual ISP accounts. Relying on cybercafé connections does not reveal any weak or strong attitudes towards belonging in a community or helping others in the community (Koc, 2007, Alghalban, 2007, The Silatech Index, 2011). Mobile phone Internet connections are increasingly popular, especially with the smartphone generation: ‘Results from a national representative telephone survey of Americans in 2000 show that Internet and mobile phone usage was very similar’ (Rice and Katz, 2002).

Table 5-14: Kind of Internet connection

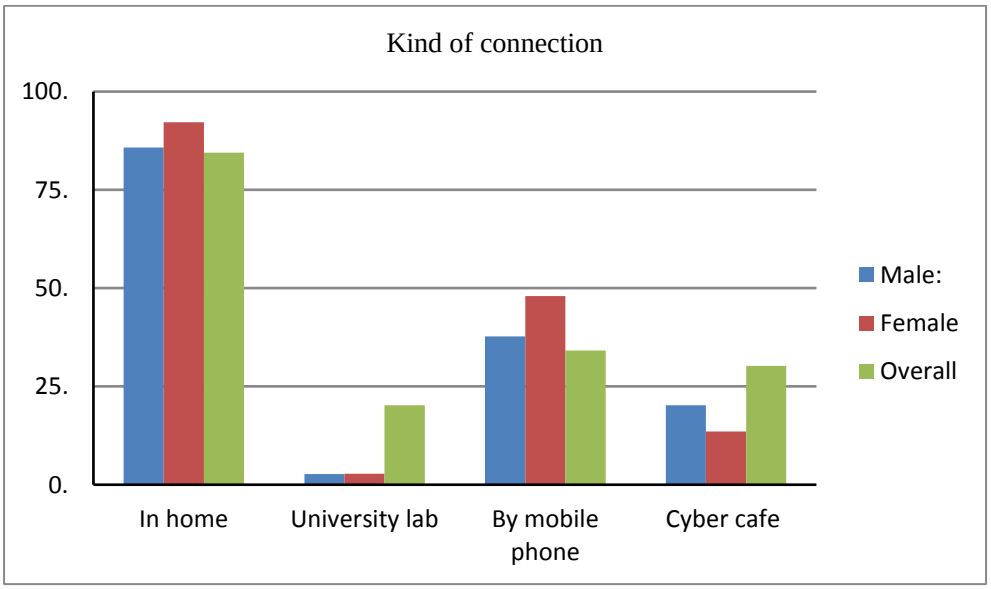
	Home %	University %	Mobile phone %	Cybercafé %
Men	85.8	2.7	37.7	20.2
Women	92.2	2.8	48.0	13.5
Overall	84.5	20.2	34.1	30.2
Urban sample / Tripoli university				
Men	85.8	2.7	37.7	20.2
Women	92.2	2.8	48.0	13.5
Overall	89.7	2.8	44.0	16.2
Rural sample / Azzawya university				
Men	89.6	17.9	29.9	31.3
Women	79.0	22.6	38.7	29.0
Overall	84.5	20.2	34.1	30.2

84.5% of respondents indicated that they have a home connection, 34.1% used a mobile connection and 30.2% a cybercafé connection. Additionally, 20.2% use a university laboratory or library connection.

Gender and area differences

85.8% of the male respondents use the Internet at home, 37.7% access it by mobile phone, 20.2% use the Internet in a cybercafé and only 2.7% in a university laboratory or library. Similarly, 92.2% of sampled women use the Internet from a home connection, 48.0% via a mobile phone connection, 13.5% in a cybercafé and only 2.8% in a university laboratory or library. Table 5-14 and Figure 5-3 summarise the details of what form of connection the respondents use to access the Internet.

Figure 5-3: Kind of Internet connection



Moreover, for area differences; 89.7% of the urban sample have a home connection, 44.0% a mobile phone connection, 16.2% access the Internet from a cybercafé and only 2.8% use university laboratories or libraries. 85.8% of sampled urban men use a home connection, 37.7% use their mobile phone to browse the Web, 20.2% go to a cybercafé and 2.7% use a university laboratory or library connection. Similarly, 92.2% of sampled urban women use a home connection, 48.0% use a mobile phone connection, 13.5% use a cybercafé and only 2.8% use a university laboratory or library.

84.5% of the rural sample use a home connection, 34.1% connect using their mobile phone, 30.2% uses a cybercafé connection and 20.2% connected from a university laboratory or library. 89.6% of sampled rural men use a home connection, 29.9% use their mobile phone, 31.3% use a cybercafé and 17.9% connect from a university laboratory or library. Similarly, 79.0% of sampled rural women use a home connection, 38.7% connect using a mobile phone, and 29.0% from a cybercafé and 22.6% use the Internet in university laboratories or libraries.

These results are supported by the interviews with the parents of young Libyans. For example, one parent said that 'the Internet connection in the home is important for our child and is better than outside home and they can stay home and do their homework, it is like any important thing which we need in our life and we spend money for Internet connection as we spend it for food' and another stressed that 'children are using mobile phones to connect to the Internet more and more'. This suggests that people are now keener to be online anywhere and at any time.

In responding to survey question: 6, Table 5-14 shows that:

- Home connections are most popular for going online, showing that those Libyan university students, their families and therefore society are interested in being online and that Libyan households are increasingly connected to the Internet. No gap was noticed between the different areas of residence regarding home connections, but there was a slight difference in the use of mobile phone connections between the urban and rural samples.
- Approximately one third of the sample used a mobile phone to access the Internet, which indicates their desire to be able to go online anywhere and at any time.
- University laboratories or libraries are least commonly used to access the Internet in both areas and for both genders. The results showed no statistically significant variance in the type of Internet connection preferred.
- The highest rate of cybercafé use is not more than one third. Women prefer home connections to cybercafés.
- In terms of the Internet skills that are part of the digital divide (Van Dijk and Hacker, 2003), these results suggest that there are no statistically significant differences between the genders and that both genders have similar levels of opportunity, access and skill when it comes to connecting to the Internet.

Livingston et al., (2009) noted that the distinction between home and other access locations was important in explaining Internet use and that home access is considered to be of higher quality than public location access.

5.3.7 Experiences of and ability to use the Internet

This section examines the relation between use of the Internet and users' experience. Accessing the Internet might not be easy, which in turn might play a role in the extent of influence of the Internet on young people's lives. Moreover, the digital divide can be examined by investigating users' experience of Internet use experience.

5.3.8 Obstacles to the gratification of needs online

In order to measure the experience of going online, survey question: 7 asked participants if they ever encounter difficulties using the Internet which is important information if we are to understand the relationship between young people and the Internet and investigate the extent of its use

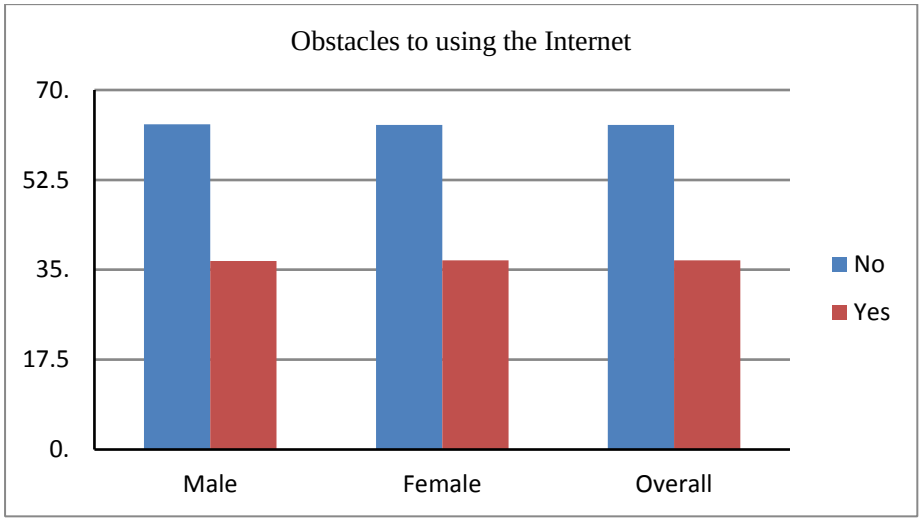
Table 5-15: Obstacles to the gratification of needs online

Percent	No	Yes
Men	63.3	36.7
Women	63.2	36.8
Overall	63.2	36.8
Urban sample / Tripoli university		
Men	63.3	36.7
Women	63.2	36.8
Overall	63.2	36.8
Rural sample / Azzawya university		
Men	62.7	37.3
Women	58.1	41.9
Overall	60.5	39.5

Gender and area differences

63.3% of male respondents have no difficulties when using the Internet, and 36.7% mentioned that they sometimes had difficulties. To a similar extent, 63.2% of the female respondents noted that they have no difficulties, whereas 36.8% said that they sometimes have issues.

Figure 5-4: Obstacles to the gratification of needs online



For area differences: 63.2% of the urban sample claimed they have no difficulties when using the Internet and 36.8% stated that they do sometimes. 63.3% of the urban men have no difficulties in using the Internet, but 36.7% have some difficulties. 63.2% of the sampled urban women noted that they have no difficulties, but 36.8% said that they have some problems.

60.5% of the rural respondents noted that they have no difficulties in going online, and 39.5% noted that they have some difficulties. 62.7% of rural men have no difficulties, whereas 37.3% have some issues. Similarly, 58.1% of urban women have no difficulties, while 41.9% do. Table 5-15 summarises these results.

For the variable of gender, the value of the coefficient of the Chi-square is .001 and the Sig is .971. Thus, there is no statistically significant variance between the genders. Furthermore, the value of the coefficient of the Chi-square test is .481 and the Sig is .488 for the variable of location, which again means that it had no statistically significant effect on the results and both are the same.

Table 5-16: Gender and areas Chi: difficulties when using the Internet.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Are there any difficulties when using the Internet?	.001	.481	1	1	.971	.488

In answering survey question: 7, Table 5-15 shows that:

- The majority of the sample did not encounter any difficulties in using the Internet, and more significantly, no difference was revealed between the genders for this aspect.
- The results were also roughly the same for respondents residing in urban and rural areas.
- Approximately one third of the sample experienced difficulties in using the Internet, and this proportion was constant between the genders and areas of residence.

5.3.9 Kinds of obstacles to the gratification of needs online

There may be obstacles to Internet use in any society, but this is particularly true in Arab societies which might experience obstacles such as censorship, control or price. There might be social or political obstacles such as blocked websites, the filtering of information or security monitoring, and these must be investigated and uncovered in order to understand the environment of Internet use in Libyan society. According to Deibert (2009, p.327) 'many countries justify their censorship practices as a way to block access to pornography ... some of the countries in which we found evidence of content filtering in each of these major categories began by blocking only a few select sites'. Also, middle-income families may face problems in paying connection fees, which in turn might decrease and limit the amount of time they can spend online. Therefore, sample was asked to describe obstacles to Internet they faced, with the options of connection price, family, university, and cybercafé control and other. The respondents could select more than one option if they wished.

Table 5-17: Kinds of obstacles and difficulties:

	Price	**Other difficulties**	**No obstacles**	**Control and monitoring**
Men	42.0	36.5	27.1	28.7
Women	62.4	29.5	19.2	25.4
Overall	53.5	45.6	14.9	23.8
Urban sample / Tripoli university				
Men	42.0	36.5	27.1	28.7
Women	62.4	29.5	19.2	39.0
Overall	54.2	23.3	22.3	35.0
Rural sample / Azzawya university				
Men	46.7	58.3	16.7	25.0
Women	61.1	31.5	13.0	22.4
Overall	53.5	45.6	14.9	23.7

The findings revealed that 23.8% of the samples found that the control and monitoring of Internet access is a major obstacle to their use. Moreover, 53.5% noted that the price of connection was a problem, 14.9% encountered no obstacles while 45.6% noted that they faced other kinds of obstacles.

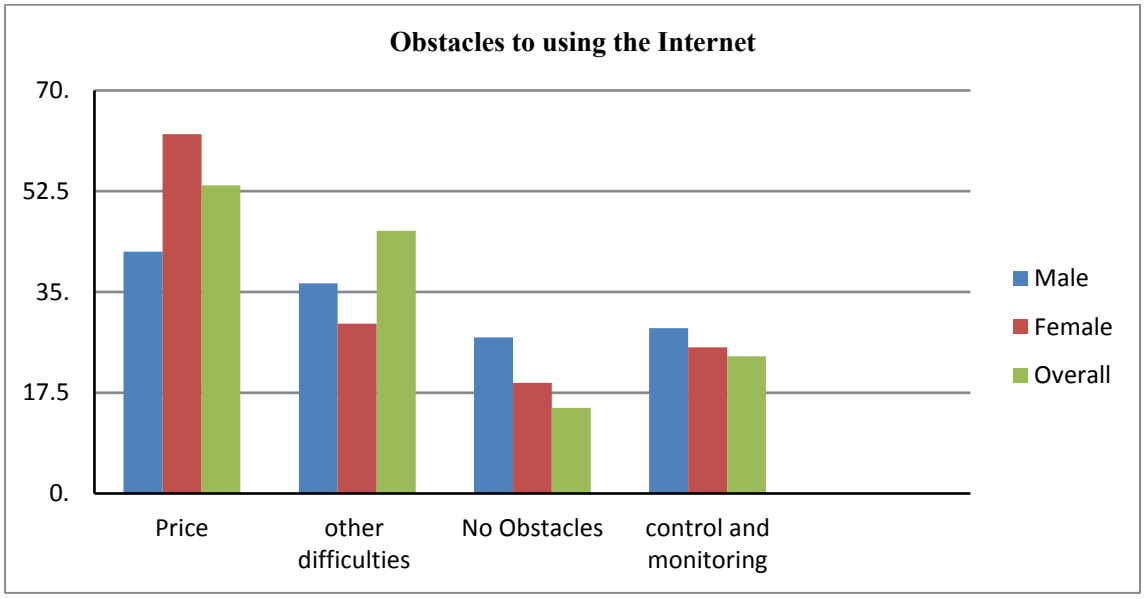
- Gender and area differences

42.0% of the male respondents and 62.4% of the female respondents claimed that the price of connection was an obstacle. Some form of control of Internet usage was noted by 28.7% of the men and 25.4% of the women as an obstacle to their use. 27.1% of men and 19.2% of women felt that they faced no obstacles to Internet use. Moreover, for area differences; 54.2% of the urban sample noted that the price of connection was an obstacle to their Internet use, 35.0% noted that control and monitoring is an obstacle, 32.3% faced other kinds of obstacles and 22.3% faced no obstacles to Internet use. 42.0% of urban men noted price and connection costs as an obstacle, 28.7% noted

control and monitoring as obstacles, 36.5% reported facing other obstacles and 27.1% faced no obstacles. 62.4% of urban women noted price and cost of connection as obstacles to Internet use, 39.0% noted control and monitoring as obstacles, 29.5% faced other obstacles and 19.2% faced no obstacles.

On the other hand, 53.5% of the rural sample noted cost of connection as an obstacle, 23.7% noted control and monitoring as obstacles, 45.6% faced other kinds of obstacle and 14.9% faced no obstacles. 61.1% of rural women noted that connection price is an obstacle, while 22.4% suffered from control and monitoring, 31.5% faced other kinds of obstacle and 13.0% faced no obstacles. For rural men, 46.7% noted that price is an obstacle, 25.0% regarded control as an obstacle, 58.3% faced other kinds of obstacle and 16.7% faced no obstacles.

Figure 5-5: Kinds of obstacles and difficulties



A large number of particularly rural men stated ‘other difficulties’; according to Ablak (2011) Turkish Internet users are facing some obstacles, for example; many users couldn’t connect with their poor speed, and difficulties about reaching desirable content. Moreover, this could be users’ income and their economic class in society that affect their ability to obtain good Internet services. Other obstacles could be technical such as weak network and space obtained from subscription, the type of device used, and the power and frequency of this device. Also, some obstacles could be the weakness of capabilities of service providers and the impact of geographical factors such as mountains and desert.

Table 5-18: Gender and area Chi: Kind of difficulties when using the Internet

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
What difficulties / obstacles have samples experienced?	2.234	.263	2	2	.327	.877

When applying the Chi-square test to the variable of gender, the value of the coefficient of the Chi-square is .001 and the Sig is .971. This means that gender did not significantly affect. Furthermore, for the variable of area of residence, the Chi-square test produced a coefficient of .481 and the Sig was .488. Thus there was no statistically significant effect on the results and both the urban and rural samples were the same.

These results were supported by the results of interviews and thematic analysis. The media experts noted that 'young Arab users face some obstacles in using the Internet, connection cost is really an obstacle for poor families especially with the high cost comparison to families income in some Arab countries. Also government monitoring is one of the wide obstacles especially in a political way, and in some way family monitoring specially for girls'. The parents similarly indicated that they 'try to control and monitor their children's use of the Internet', but they also commented that 'it is difficult even if it is the only way they can be sure how their children use the Internet'. Moreover, the thematic analysis indicated that 'language is one of the obstacles to using the Internet, and it was perceived that the Internet in Arab societies may be used for the monitoring of people' (Mustafa, 2005).

In responding to survey question: 8, Table 5-17 shows that:

- Price is the main obstacle to using the Internet, affecting more than half of the sample across both genders and areas.
- Control and monitoring of Internet use were noted to be obstacles to Internet use by nearly one third of the samples, although the proportion was higher for the urban sample. Women felt that control and monitoring was an obstacle more than men did, although there are no important differences between the attitudes of the women in both areas.
- Nearly half of the rural sample but only one third of the urban sample had encountered some other kind of obstacle. More rural than urban men reported facing other obstacles, whereas women in both areas showed similar results.

5.3.10 Summary of experience

The section has looked at the use of the Internet by respondents from Tripoli and Azzawya universities. It has dealt with the descriptive data about the use of the Internet which was produced by analysing the answers to the six questions regarding users' experience. The selection provided interesting main findings that are supported by the complementary findings and address the aims,

objectives, topics and study questions of this research. The majority of the sample was aged 18-26 and only 0.3% was older than 26; almost half the sample was aged 18-20. More than half of the sample was women and less than half men, and this proportion is true for the samples from both universities. 64% of the sample was from Tripoli University, which is in an urban area, and 36% was from Azzawya University, which is in a rural area.

Data analysis firstly answered the study question of 'how many young Libyan people have computers and to what extent do they use the Internet?' It found that 93.5% of university students own computers and that their families are interested in owning computers at home. There were no statistically significant differences between genders or areas of residence.

The second study question investigated 'how much experience university students have of using the Internet'. 98.5% of the respondents stated that they use the Internet, with no statistically significant differences between genders or areas of residence. This result shows the wide spread of interest of using the Internet among Libyan university students. Regarding the average of time spent online, 64% of the respondents accessed the Internet every day, again with no statistically significant variance between areas or genders, and 63.6% of the respondents use the Internet for between 3 and 5 hours a day, again with no statistically significant differences between genders and areas.

The findings also showed how widespread Internet connections have become in Libyan society: 84.5% of respondents use a home connection, 34.1% use a mobile phone connection, and 30.2% access the Internet in cybercafés and 20.2% use university facilities for this purpose. Female respondents used home and mobile phone connection more than men, whereas men used cybercafé connections more than women. There is no statistically significant difference between the areas regarding home connection; however, rural respondents use university laboratories and libraries to go online more than do urban respondents. The findings also indicated that most respondents have used the Internet for more than 2 years and about a third of respondents have used it for only 1 to 2 years. No statistically significant differences were noticed between the genders or areas.

The next question asked, 'are there any difficulties encountered when using the Internet and what are they?' Two thirds of respondents had not found any obstacles in using the Internet, while the rest of the samples stated that they had encountered some obstacles. Again there were no statistically significant differences between genders or areas of residence. Connection cost was the most common obstacle for young Libyan users, with 53.5% describing it as difficult, again, with no statistically significant differences between genders or areas of residence. The next section focuses on gratifications derived from Internet use.

5.4 Purposes of Internet use and gratifications achieved

This section first: analyses users' ability of going online, and second: analysis the motivations of their Internet use. This analysis is supplemented by the qualitative data from the interviews and thematic analysis.

Ebersole (2000), Charny, (1996), Stetter (1997), Yoo (1996) and Kaye (1998) have noted that the Internet is now a subject of use and gratification studies around the world. Users have little trouble verbalising their needs when using the Internet (Piirto, 1993, Ryan, 1995, Eighmey and McCord, 1997, Lillie, 1997, Nortey, 1998). More significantly, individual needs are an issue in the motivation of users, (Katz et al., 1974). Ferguson and Perse (2000, p.155-174) pointed out that there are four main motivations for Internet use: entertainment, passing time, relaxation/escape and social information. Lin (2001, p.19-38) suggested that online services should be fashioned to satisfy people's need for useful information as well as for social interaction. Newhagen et al. (1996) noted that use and gratification theory may be useful for examining the mutability of the web. This main data analysis and presentation would answer RQ4 and RQ5 study questions, also, it will be joined by analysis and presentation of interview and themes analysis data (see section 5.4.6, 5.4.11, 5.4.15 and 5.4.18).

5.4.1 Ability of Internet navigation to satisfy needs

Using the Internet as a new means of communication might be one way of satisfying users' needs. Respondents were asked by survey question 9 to describe whether their use of the Internet is easy or difficult. The findings showed that there is a relation between the use of the Internet and the gratification of needs (Piirto, 1993, Ryan, 1995, Eighmey and McCord, 1997, p.187-194, Lillie, 1997, Nortey, 1998). However, browsing websites might be easy or difficult, related to the user's experience of using the Internet, and this can be a major factor in measuring the influence of it (Al-Khauja, 2000, Louis, 2003, Al-Shaebany, 2007, Al-Saidy and Al-Guery, 2008, Hamdi, 2010, Stepanova, 2010, Ziani et al., 2015). 86.4% of the respondents claimed they find it easy to navigate websites in order to satisfy their needs, and 13.5% reported that they have difficulty always satisfying their needs in this way.

Gender and area differences

Data analysis shows that 83.0% of the sampled men and 89% of the sampled women could satisfy their needs easily, while 17.0% of the men and 11% of the women described experiencing some difficulties. For area differences; 87.9% of the urban sample found it easy to satisfy their needs through Internet use, and 12.1% encountered some difficulties. 86.2% of urban men said they can satisfy their needs easily, while 13.8% had difficulty, and 89.1% of urban women satisfied their needs easily, while 10.9% claimed to have some difficulties. 81.2% of the rural sample satisfied their needs easily, whereas 18.7% found it difficult to do so. 74.7% of rural male respondents satisfied their

online needs easily, but as many as 25.4% said they found it difficult. Also, 85.1% of rural women respondents noted that they satisfy their online needs easily, but 18.7% have difficulties.

Table 5-19: Ability to use the Internet

%	Easy	Difficult
Men	83	17
Women	89	11
Overall	86.4	13.5
Urban sample / Tripoli university		
Men	68.2	13.8
Women	89.1	10.9
Overall	87.9	12.1
Rural sample / Azzawya university		
Men	74.7	25.4
Women	85.1	18.7
Overall	81.2	18.7

The application of the Chi-square produced a value for the coefficient of the Chi-square for the variable of gender of 2.89 and the Sig was .014, this showed that the results were influenced by gender differences. For the variable of area of residence, the value of the coefficient of the Chi-square is 16.928 and the Sig is .002. This demonstrates that this variable also affected these results.

Table 5-20: Gender and areas Chi: ease of satisfaction.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Ease of satisfaction	2.89	16.928	4	4	.014	.002

The thematic analysis found that ‘although government sponsorship and monitoring of websites navigated, young users have ability to skip Internet proxy and do what they want to do; this was happening in Egypt, Tunisia and also in Libya during the time of the Arab Spring’ (Mustafa, 2005).

In responding to survey question: 9 19 shows that:

- The majority of the sample was able to satisfy their online needs easily, both in urban and rural samples.
- The majority of men and women found it easy to satisfy their needs online, while about a tenth of respondents of both genders noted that they sometimes experience difficulties in gratifying their needs. Women were slightly more likely to state that it was easy to satisfy needs than men.
- The majority of respondents in both rural and urban areas satisfy their online needs easily; however, rural respondents were a little more likely to encounter difficulties doing so.

5.4.2 Motivations and purposes of Internet use

Libyan university students might use the Internet to help them to gratify their needs through their online social, cultural and political interactions (Ryan, 1995, Dunleavy and Weir, 1998, Kaye, 1998). If these interactions are gratifying, then we can understand use behaviour as a legitimate activity, as identified by Eighmey and McCord (1998, p.187-94) and Korgaonkar and Wolin (1999, p.53-68). Particularly, use of the Internet in the Arab world and in Libya might gratify users' needs (Louis, 2003, Rabea, 2006, Alghalban, 2007, Ibrahem, 2008, Abo-Harara, 2010, The Silatech Index 2011, Ziani et al., 2015). Furthermore, this relation between users and the Internet might build up day after day as they become more interested in going online and gratifying their needs and it might come to influence their behaviour and thus play an important role in social change and the appearance of a new society.

Therefore, respondents were asked by survey question: 10 (see appendix B, pp. 337-349) to score twelve proposed gratifications using a scale of 'strongly disagree', 'disagree', 'neither agree nor disagree', 'agree' and 'strongly agree'. Analysis of the percentages and the Chi-square tests is presented below and followed by an interpretation of the results based on the study of the variables of gender and area of residence. These twelve purposes and gratification options included social, cultural and political factors. This analysis includes complementary instrument results analysis of the interviews and thematic analysis, (see the tables in appendix A, section B, pp, 305 - 311).

5.4.3 Social purposes and gratifications of using the Internet

Use of the Internet might be for social purposes and in this way; users can satisfy their social needs. Internet use can be a form of social activity, as described by Fauad (2009), when users are connected to their friends and share and discuss what they want with their online friends anywhere and at any time. The Internet can therefore be a social tool that allows young people to engage in new social activities (Louis, 2003, Rabea, 2006, Ziani et al., 2015) (see the tables in appendix A, section B)

5.4.4 To make contact with online friends

The Internet might gratify users' needs to engage in online chat with friends. 50.9% of the respondents strongly agree and 42.5% agree with this statement, 5.7% neither agree nor disagree while only disagree 0.9% and 0.0% strongly disagree.

Gender and area differences

48.0% of the men in the sample strongly agree and 45.2% agree, 5.6% neither agree nor disagree while 1.2% disagreed. Similarly, 53.1% of the women in the sample strongly agree and 40.5% agree, 5.8% neither agree nor disagree. While only 0.6% disagree. Moreover, for area differences; 51.6% of

the urban sample strongly agreed and 42.2% agree and 5.8% neither agree nor disagree whereas only 0.4% disagreed. 48.1% of urban men strongly agree and 46.4% agree, and 4.4% neither agree nor disagree while 1.1% disagreed. 54.0% of urban women strongly agree and 39.2% agreed; 6.8% neither agree nor disagree but 0.0% disagreed.

Furthermore, 48.4% of the rural respondents strongly agree and 43.8% agree; and 5.5% neither agree nor disagree while, only 2.3% disagree. However, 47.8% of the rural men in the sample strongly agree and 41.8% agree; and 9.0% neither agree nor disagree but, only 1.4% disagreed. Finally, 49.2% of rural women samples strongly agree, 45.9% agree, and 1.6% neither agreed nor disagree, while 3.3% disagree.

Table 5-21: Gender and area Chi: contact online friends.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
To make contact with online friends	2.021	4.533	3	3	.568	.209

For the variable of gender, the value of the coefficient of the Chi-square was 2.021 and the Sig was .568. Therefore the variable did not affect the results and both genders were the same. Moreover, the variable of area of residence produced a Chi-square coefficient of 4.533 and the Sig was .209, which also means that both areas were the same.

5.4.5 To override local social monitoring

In response to the statement that 'The Internet might break down social monitoring', such as that of parents and of the traditional Arab social mentality, 17.6% of the sample strongly agree and 30.1% agree; 28.7% neither agree nor disagree, while 16.9% disagree 6.6% and strongly disagree.

Gender and area differences

17.3% of the men in the sample strongly agree and 25.4% agree, while 20.2% disagree 8.1% strongly disagree and 29.0% neither agree nor disagree. Furthermore, 17.8% of women in the sample strongly agree and 33.7% agree, while 28.5% neither agree nor disagree, 14.4% disagree 5.5% and strongly disagree. For area differences; 16.4% of respondents in urban areas strongly agree and 29.7% agree, while 31.9% neither agree nor disagree, 6.5% strongly disagree and 15.5% disagree. 17.3% of urban men strongly agree and 22.7% agree, while 33.1% neither agree nor disagree, 8.3% strongly disagree and 18.2% disagree. 15.5% of urban women strongly agree and 34.5% agree, while 31.1% neither agree nor disagree, 5.3% strongly disagree and 13.6% disagree.

Similarly in rural areas 21.7% of the respondents strongly agree and 31.8% agree, while 17.8% neither agree nor disagree 7% strongly disagree and 21.7% disagree. 16.4% of rural men strongly agree and 32.8% agree, while 17.9% neither agree nor disagree, 7.5% strongly disagree and 25.4% disagree. Similarly, 27.4% of rural women strongly agree and 30.6% agree, but 17.7% neither agree nor disagree, 6.5% strongly disagree and 17.7% disagree.

Table 5-22: Gender and area Chi: override local social monitoring.

	Value		Df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To override local social monitoring	7.405	11.061	4	4	.116	0.26

The Chi-square analysis for gender produced a coefficient of 7.405 and the Sig was .116 which means that there was no statistically significant variance due to the variables. Similarly the value of the coefficient of the Chi-square for area was 11.061 and the Sig was 0.26, showing that the area did not affect results.

5.4.6 To share and discuss information and ideas with groups of friends

The Internet might give users opportunity to discuss new information and ideas. The results showed that 38.6% of the sample strongly agree with this statement and 47.8% agree, but 10.1% neither agree nor disagree, 0.3% strongly disagree and 3.1% disagree.

Gender area differences

37.7% of the sampled men strongly agree and 46.6% agree, but 11.7% neither agree nor disagree and 4.0% disagree. Among the women, 39.3% strongly agree and 48.8% agree, but 8.9% neither agree nor disagree, only 0.6% strongly disagree and 2.5% disagree. Moreover, for area differences; 38.7% of the urban sample strongly agree and 47.6% agree, but 10.3% neither agree nor disagree, 0.4% strongly agree and 2.9% disagree. Moreover, 37.0% of the sampled urban men strongly agree and 45.9% agree, but 13.3% neither agree nor disagree, and only 3.9% disagree. Similarly, 39.8% of urban women strongly agree and 48.9% agree, but 8.3% neither agree nor disagree, 0.8% strongly disagree and 2.3% disagree.

38.3% of the rural respondents strongly agree and 48.4% agree, but 9.4% neither agree nor disagree and 3.9% disagree. Moreover, 39.4% of rural men strongly agree and 48.5% agree, but 7.6% neither agree nor disagree, and only 4.5% disagree. 37.1% of rural women strongly agree and 48.4% agree, but 11.3% neither agree nor disagree and 3.2% disagree.

Table 5-23: Gender and area Chi: share and discuss information with friends.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To share and discuss information with groups of friends	4.015	1.052	4	4	.404	.902

For gender, the value of the coefficient of the Chi-square was 4.015 and the Sig was .404. This shows that gender did not affect the results because there was no statistically significant difference. For the area variable, the value of coefficient of the Chi-square was 1.052 and the Sig was .902. This again means that area had no statistically significant effect on the results, and both area samples were similar.

The analysis of the answers to the three questions showed that respondents use the Internet to satisfy their social needs. This was also noted in the interviews with media experts, one of whom said that young Arabs 'going online for chatting with friends build online social relationship as community where they have information'. Moreover, the thematic analysis found that 'young Arabs use the Internet as a new mean for friendship relation with the other gender as a new relationship for love and social purposes, and the purpose is chatting with new friends without monitoring' (Al-Boraehi, 2011). Moreover, the 'social purposes of using the Internet in the Arab world are common and not only for their personal relationship but also for their tribe relationship. Young Arabs nowadays have tribe groups on the social media where they have strong tribe relationship' (Gharssalla, M., 2013). Both genders are interested in having new and free relationships without pressure or control from family and society.

5.4.7 Cultural purposes and gratifications of using the Internet

A desire for cultural information and a form of cultural liberation are among potential cultural motivations for Internet use (Louis, 2003, Rabea, 2006, Hamdi, 2010, Ziany, 2010). The Internet might be used to obtain information about other cultures or lifestyles. Those are forms of cultural gratification which might be satisfied through the user's online interactions. (see appendix A, section B)

5.4.8 To have new information

One possible motivation for Internet use is to obtain new information about users' interests. 32.6% of the sample strongly agree with the statement that the Internet allows them access to free information, 36.8% agree, but 22.3% neither agree nor disagree, 2.8% strongly disagree and 5.5% disagree.

Gender and area differences

36.1% of the sampled women strongly agree and 35.8% agree, but 21.4% neither agree nor disagree, 1.5% strongly disagree and 5.1% disagree. As for the men, 27.9% strongly agree 38.1% agree, 23.5% neither agree nor disagree but 4.5% strongly disagree and 6.1% agree. For area differences; 27.1% of the rural sample strongly agree and 37.2% agree, while 23.2% neither agree nor disagree, only 3.9% strongly disagree and 8.5% disagree. 30.6% of rural women strongly agree and 37.1% agree, while 27.4% neither agree nor disagree, 0.0% strongly disagree and 4.8% disagree. 23.9% of rural men strongly agree and 37.3% agree, while 19.4% neither agree nor disagree, only 7.5% strongly disagree and 11.9% disagree.

Moreover, 34.2% of the urban respondents strongly agree and 36.7% agree, while 22.0% neither agree nor disagree, only 2.4% strongly disagree and 4.7% disagree. 37.4% of urban women strongly agree and 35.6% agree, but 20% neither agree nor disagree, 1.9% strongly disagree and 5.2% disagree. 29.4% of urban men strongly agree and 38.3% agree, while 25% neither agree nor disagree, only 3.3% strongly disagree and 3.9% disagree.

Table 5-24: Gender and area Chi: to have new information.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To have new information	8.077	5.264	4	4	.089	.261

For gender the value of the coefficient of the Chi-square was 8.077 and the Sig was .089. These showed that both categories were the same and gender did not affect the results. For area, the value of the coefficient of the Chi-square was 5.264 and the Sig was .261 which shows that area did not affect the results.

5.4.9 To have information about other cultures

Information about other culture, such as about music, sports and tourism, is another possible motivation for Internet use. 39.1% of the sample strongly agree that the Internet gives them the information they need, 1.4% disagree; 6.6% neither agree nor disagree. 52.1% agree, but and 0.9% strongly disagree.

Gender and area differences

38.3% of the men in the sample strongly agree and 53.6% agree, while 5.6% neither agree nor disagree, only 1.6% strongly disagree and 0.8% disagree. Similarly, 39.7% of women samples strongly agree and 50.9% agree, while 7.3% neither agree nor disagree, only 0.3% strongly disagree and 1.8% disagree. Moreover, 39.2% of the urban sample strongly agree and 51.9% agree, while 6.9% neither agree nor disagree only 0.9% strongly disagree and 1.1% disagree. 39.2% of sampled urban men strongly agree and 53.6% agree, but 5% neither agree nor disagree, 1.7% strongly disagree and 0.6% disagree. In the same way, 39.0% of urban women strongly agree and 50.7% agree, but 8.2% neither agree nor disagree, 0.4% strongly disagree and 1.5% disagree.

Similarly, 38.8% of the rural respondents strongly agree and 52.7% agree, but 5.4% neither agree nor disagree, 0.8% strongly disagree and 2.3% disagree. 35.8% of rural men strongly agree and 53.7% agree, but 7.5% neither agree nor disagree, 1.5% strongly disagree and 1.5% disagree. 41.9% of rural women strongly agree and 51.6% agree, but 3.2% neither agree nor disagree, 0.0% strongly disagree and 3.2% disagree.

Table 5-25: Gender and area Chi: to have information about other cultures.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To have information about other cultures	4.697	1.467	4	4	.320	.833

For gender, the value of the coefficient of the Chi-square was 4.697 and the Sig was .320, which means that the results were the same for both genders. For the category of area, the value of the coefficient of the Chi-square was 1.467 and the Sig was .833, which shows that the results were not affected by area.

5.4.10 To have ideas about lifestyles in other countries

In response to the claim that the Internet gives users easy information about lifestyles, conditions and life circumstances in other countries and societies, 46.2% of the sample strongly agree and 44.2% agree, while 6.6% neither agree nor disagree, only 0.3% strongly disagree and 2.6% disagree.

Gender and area differences

46.2% of the men in the sample strongly agree and 43.1% agree, while 7.3% neither agree nor disagree, only 0.4% strongly disagree and 2.8% disagree. As for the women respondents, results showed that 46.2% strongly agree and 45.0% agree, while 6.1% neither agree nor disagree, only 0.3% strongly disagree and 2.4% disagree. Moreover, of residents of urban areas, 46.2% strongly agree and 45.0% agree, while 6.1% neither agree nor disagree, only 0.5% strongly disagree and 2.3% disagree. 45.3% of urban women strongly agree and 46.0% agree, but 6.0% neither agree nor disagree, 0.4% strongly disagree and 2.3% disagree. Similarly, 47.5% of urban men strongly agree and 43.6% agree, while 6.1% neither agree nor disagree, only 0.6% strongly disagree and 2.2% disagree.

The same is true in rural areas, where 46.5% strongly agree and 41.1% agree, while 8.5% neither agree nor disagree, 0.0% strongly disagree and 3.9% disagree. 50.0% of rural women strongly agree and 40.3% agree; none strongly disagree, 6.5% neither agree nor disagree and 3.2% disagree. No statistically significant differences from the rural men were noticed: 43.3% of the sampled rural men strongly agree and 41.8% agree, but 10.4% neither agree nor disagree, none strongly disagree and 4.5% disagree.

Table 5-26: Gender and area Chi: to have idea about life style in other countries.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
To have idea about life style in other countries	.543	2.749	4	4	.969	.601

When applying the Chi-square test to the gender categories, the value of coefficient of the Chi-square was .543 and the Sig was .969, which means that no effect was identified. Regarding the area categories, the value of the coefficient of the Chi-square was 2.749 and the Sig was .601. This demonstrates that area categories did not affect the results.

5.4.11 For entertainment

The Internet helps to provide gratification of the need for leisure and entertainment through such activities as playing games, listening to music and watching movies online. 19.1% of the sample strongly agree with this statement and 42.2% agree, but 27.5% neither agree nor disagree, 3.3% strongly disagree and 7.9% disagree.

Gender and area differences

17.6% of the sampled men strongly agree and 43.3% agree, but 28.2% neither agree nor disagree, 3.3% strongly disagree and 7.8% disagree. Of women, 20.2% strongly agree and 41.4% agree, while 27.0% neither agree nor disagree, only 3.4% strongly disagree and 8.0% disagree. For area differences: 21.0% of the urban sample strongly agree and 40.4% agree, while 27.5% neither agree nor disagree, only 3.8% strongly disagree and 7.7% disagree. 18.5% of the sampled urban men strongly agree and 42.1% agree, while 28.7% neither agree nor disagree, 3.9% strongly disagree and 6.7% disagree. 22.6% of the sampled urban women strongly agree and 39.2% agree, but 26.0% neither agree nor disagree, 3.8% strongly disagree and 8.3% disagree.

12.5% of the rural respondents strongly agree and 48.4% agree, while 28.9% neither agree nor disagree, only 1.6% strongly disagree and 8.6% disagree. 14.9% of sampled rural men strongly agree and 46.3% agree, but 26.9% neither agree nor disagree, 1.5% strongly disagree and 10.4% disagree. 9.8% of sampled rural women strongly agree and 50.8% agree, but 31.1% neither agree nor disagree, 1.6% strongly disagree and 6.6% disagree.

Table 5-27: Gender and area Chi: for entertainment.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
For entertainment	.729	7.358	4	4	.948	.118

For gender, the value of the coefficient of the Chi-square was .729 and the Sig was .948, which means that gender categories did not affect the results. For area, the value of the coefficient of the Chi-square was 7.358 and the Sig was .118, which means that area categories did not affect the results. The results show that the respondents are motivated to use the Internet in order to satisfy their cultural needs. The thematic analysis supports these results and noted that the 'majority of young users play games on the web, they are interested in music and watching films. These are motivations for using the Internet and lead those users to be addicted to going online and also being more related to the Internet' (Al-Boraehi, 2011).

5.4.12 Political purposes and gratifications of using the Internet

Political purposes and gratifications might lead users to access the Internet in order to express their opinions or obtain political news and information about the world. This is a kind of need that young Libyans want to satisfy (Louis, 2003, Ziany, 2010, Allagui and Kuebler, 2011, Zoda, 2011, Ziani et al., 2015) (See the tables in appendix A, pp, 305 - 336).

5.4.13 To express my opinions about various issues

Regarding the liberty to express political opinions, the findings showed that 27.3% of the sample strongly agree that the Internet allows them to express their opinion and 53.6% agree, while 15.8% neither agree nor disagree, only 1.2% strongly disagree and 2.1% disagree.

Gender and area differences

27.9% of the sampled men strongly agree and 51.8% agree, while 16.6% neither agree nor disagree, only 1.6% strongly disagree and 2.0% disagree. Of the sampled women, 26.8% strongly agree and 54.9% agree, while 15.2% neither agree nor disagree, only 0.9% strongly disagree and 2.1% disagree. For area differences: 26.2% of the urban sample strongly agree and 53.8% agree, while 16.8% neither agree nor disagree, only 1.1% strongly disagree and 2.0% disagree. 27.2% of the sampled urban men strongly agree and 52.2% agree, while 17.2% neither agree nor disagree, only 1.7% strongly disagree and 1.7% disagree. 25.6% of the sampled urban women strongly agree and 54.9% agree, while 16.5% neither agree nor disagree, only 0.8% strongly disagree and 2.3% disagree.

In rural areas, 31.0% strongly agree and 52.7% agree, while 12.4% neither agree nor disagree, only 1.6% strongly disagree and 2.3% disagree. 29.9% of the sampled rural men strongly agree and 50.7% agree, while 14.9% neither agree nor disagree, only 1.5% strongly disagree and 3.0% disagree. 32.3% of rural women strongly agree and 54.8% agree, while 9.7% neither agree nor disagree, only 1.6% strongly disagree and 1.6% disagree.

Table 5-28: Gender and area Chi: express opinion about various issues.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
To express my opinions about various issues	1.055	2.110	4	4	.901	.716

For gender, the value of the coefficient of the Chi-square was 1.055 and the Sig was .901, which demonstrates that gender categories did not affect the results. Also, for area, the value of the coefficient of the Chi-square is 2.110 and the Sig is .761, which means that the area did not affect the results.

5.4.14 For political news about your country

The need to obtain political news about the users' home countries and regimes might be gratified by online interactivity. 26.1% of the sample strongly agree with this claim and 47.7% agree, but 20.2% neither agree nor disagree, 1.2% strongly disagree and 4.7% disagree.

Gender and area differences

26.1% of sampled men strongly agree and 46.1% agree, while 21.2% neither agree nor disagree, only 1.6% strongly disagree and 4.9% disagree. 26.2% of the sampled women strongly agree and 48.9% agree, while 19.4% neither agree nor disagree, only 0.9% strongly disagree and 4.6% disagree. Moreover, for area differences; 26.4% of the urban samples strongly agree and 46.7% agree, but

20.3% neither agree nor disagree, 1.1% strongly disagree and 5.4% disagree.25.7% of the sampled urban men strongly agree and 48.5% agree, but 18.4% neither agree nor disagree, 1.7% strongly disagrees and 5.6% disagree. Moreover, 26.9% of the sampled urban women strongly agree and 45.5% agree, while 21.6% neither agree nor disagree, only 0.85% strongly disagree and 5.3% disagree.

25.2% of the rural respondents strongly agree and 51.2% agree, while 19.7% neither agree nor disagree, only 1.6% strongly disagree and 2.4% disagree. 27.3% of the sampled rural men strongly agree and 39.4% agree, while 28.8% neither agree nor disagree, only 1.5% strongly disagree and 3.0% disagree. 23.0% of the sampled rural women strongly agree and 63.9% agree, while 9.8% neither agree nor disagree, only 1.6% strongly disagree and 1.6% disagree.

Table 5-29: Gender and area Chi: for political news about respondents' country

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
For political news about sample country	1.060	2.821	4	4	.901	.588

For gender, the value of the coefficient of the Chi-square was 1.060 and the Sig was .901, which means that gender did not affect the results. For area, the value of the coefficient of the Chi-square was 2.821 and the Sig was .588. This means that area did not affect the results.

5.4.15 To find political information from around the world

The Internet might allow users to find political information about the world. The results showed that 28.5% of the samples strongly agree and 52.7% agree, while 15.3% neither agree nor disagree, only 0.7% strongly disagree and 2.8% disagree.

Gender and area differences

26.8% of the sampled men strongly agree and 52.0% agree, but 17.9% neither agree nor disagree, 1.6% strongly disagree and the 1.6% disagree. 29.7% of the sampled women strongly agree and 53.3% agree, while 13.3% neither agree nor disagree and only 3.7% disagree. For area differences; 27.4% of the urban sample strongly agree and 53.8% agree, while 15.6% neither agree nor disagree, only 0.9% strongly disagree and 2.3% disagree. 26.1% of the sampled urban men strongly agree and 51.5% agree, while 18.9% neither agree nor disagree, only 2.2% strongly disagree and 1.1% disagree. 28.2% of the sampled urban women strongly agree and 55.3% agree, while 13.4% neither agree nor disagree, and only 3.1% disagree.

32.3% of the rural sample strongly agree and 48.8% agree, while 14.2% neither agree nor disagree, and 4.7% disagree. 28.8% of the sampled rural men strongly agree and 53.0% agree, while 15.2% neither agree nor disagree and only 3.0% disagree. 36.1% of the sampled rural women strongly agree and 44.3% agree, 13.1% neither agree nor disagree but 6.6% disagree.

Table 5-30: Gender and area Chi: find political information from around the world.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To find political information from around the world	9.779	4.575	4	4	.144	.334

For gender, the value of the coefficient of the Chi-square was 9.779 and the Sig was .144, which means that gender has not affected the results. For area, the value of the coefficient of the Chi-square was 4.575 and the Sig was .344, which shows that area had no effect on the results.

The analysis of this topic showed that the respondents use the Internet as a result of political motivations and in order to satisfy their political needs. These results are supported by the interviews and the thematic data, which showed that young Arab users of the Internet are interested in freedom and in expressing their opinions. One of the media experts said that 'browsing for local and international news improve users information and political culture in free value'; another stated that 'with the rise of Internet in society young people find a way to express their opinion and have an idea about freedom on the other side of the world, therefore, searching for open and free atmosphere where they can be free is one of the Internet motivations for use in the Arab world'. Moreover, the thematic analysis suggested that one of the purposes of Internet use is political: 'the Internet stereotype picture in young Arab users' minds is related to freedom and skipping governments' control, this is obviously clear in their use of social media such as Facebook and Twitter especially during the Arab Spring' (Yemeress, 2014).

5.4.16 Other purposes and gratification satisfied through use of the Internet.

These were investigated by using other features of the lives of young Libyans (See the tables in appendix A, section B, pp, 305 - 311).

5.4.17 For studying

The Internet might help users with their studies. 32.9% of the sample strongly agree and 46.7% agree, while 13.1% neither agree nor disagree, only 2.4% strongly disagree and 4.9% disagree.

Gender and area differences

34.6% of the sampled men strongly agree and 44.3% agree, while 13.4% neither agree nor disagree, only 4.1% strongly disagree and 3.7% disagree. 31.6% of the sampled women strongly agree and 48.5% agree, while 12.9% neither agree nor disagree, only 1.2% strongly disagree and 5.8% disagree. For area differences: 33.2% of the urban sample strongly agree and 47.0% agree, while 12.6% neither agree nor disagree, only 2.5% strongly disagree and 4.7% disagree. 36.9% of the sampled urban men strongly agree and 44.1% agree, while 11.2% neither agree nor disagree, only 3.9% strongly disagree and 3.9% disagree. 30.7% of the sampled urban women strongly agree and 48.9% agree, but 13.6% neither agree nor disagree, 1.5% strongly disagree and 5.3% disagree.

31.8% of the rural respondents strongly agree and 45.7% agree, while 14.7% neither agree nor disagree, only 2.3% strongly disagree and 5.4% disagree. 28.4% of the sampled rural men strongly agree and 44.8% agree, but 19.4% neither agree nor disagree, 4.5% strongly disagree and 3.0% disagree. 35.5% of the sampled rural women strongly agree and 46.8% agree, but 9.7% neither agree nor disagree, 0.0% strongly disagree and 8.1% disagree.

Table 5-31: Gender and area Chi: for studying.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
For studying	6.885	.389	4	4	.142	.983

For gender, the value of the coefficient of the Chi-square was 6.885 and the Sig was .142, which means that gender did not affect the results. For area, the value of the coefficient of the Chi-square was .389 and the Sig was .983, which also means that area did not influence the results.

5.4.18 To relax and enjoy time

Users might find the Internet convenient to satisfy their need to feel relaxed. 27.9% of the sample strongly agree and 30.5% agree, but 33.5% neither agree nor disagree, 2.6% strongly disagree and 5.4% disagree.

Gender and area differences

26.0% of the sampled men strongly agree and 30.5% agree, while 34.6% neither agree nor disagree, only 2.4% strongly disagree and 6.5% disagree. 29.3% of the sampled women strongly agree and 30.6% agree, but 32.7% neither agree nor disagree, 2.8% strongly disagree and 4.6% disagree. Moreover, for area differences; 27.5% of the urban sample strongly agree and 28.4% agree, but 35.9% neither agree nor disagree, 2.3% strongly disagree and 5.9% disagree. 25.0% of the sampled urban men strongly agree and 27.8% agree, but 38.9% neither agree nor disagree, 2.2% strongly disagree and 6.1% disagree. 29.3% of the sampled urban women strongly agree and 28.9% agree, but 33.8% neither agree nor disagree, 2.3% strongly disagree and 5.7% disagree.

29.1% of the rural respondents strongly agree and 37.3% agree, but 25.2% neither agree nor disagree, 3.9% strongly disagree and the 3.9% disagree. 28.8% of the sampled rural men strongly agree and 37.9% agree, but 22.7% neither agree nor disagree, 3.0% strongly disagree and 7.6% disagree. Finally, 29.5% of the sampled rural women strongly agree and 37.7% agree, but 27.9% neither agree nor disagree, 4.9% strongly disagree and 0.0% disagree.

Table 5-32: Gender and area Chi: to relax and enjoy time.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To relax and enjoy time	1.653	8.433	4	4	.799	.077

For gender, the value of the coefficient of the Chi-square was 1.653 and the Sig was .799, which shows that gender did not affect the results. For area, the value of the coefficient of the Chi-square was 8.433 and the Sig was 0.77. This shows that area did not affect the results.

The analysis of answers given by the respondents showed that they use the Internet for relaxing. These results are supported by the thematic analysis: 'one of the important purposes of using the Internet by Arab young people is to have relationship with other gender and to gratify their romantic needs, because online relationship is easy and private. It is common that most Arab young users are using chat and online conversation for love and personal needs' (Al-Boraehi, 2011). Also one of the media experts said that 'Internet use motivations have improved through daily needs which young people satisfy through their Internet navigation'.

In responding to survey question: 10, (see appendix A, section B) results analysis showed that:

- The Internet is used for social, cultural, and political purposes.
- Both genders express the same needs, except that women are more interested in using the Internet to form new relationships than are men.
- The respondents are widely interested in gratifying their cultural needs, although this category also includes some social and political elements.
- Political information is a significant benefit of using the Internet.
- No statistically significant differences were noticed between urban and rural areas.

5.4.19 Overall gender and area interaction effects

To explore if there are any potential interactions between gender and area a layered Chi square analysis was undertaken for all the survey questions. In all but three cases no statistically significant interactions between gender, area and Likert scale responses were found (at $p<0.05$). The three results at $p<0.05$ were:

- Use of YouTube
- Accessing entertainment
- Accessing Libyan and International News

Given that multiple tests were undertaken it is necessary to apply stricter significance criteria due to the high likelihood of 'false positive' results (Type I errors). Applying a simple stricter confidence level ($p<0.025$) only one result was significant (Entertainment). Examining the three variables in more

detail found none of the results to have significant interaction effects between the variables with results being driven by one of the two variables and this has been reported in the sections above. From this we can conclude that interaction effects between gender and area are not present in the data.

5.4.20 Summary of purposes for internet use

The chapter has looked at Libyan university students' use of the Internet. It has measured Internet use, starting with computer ownership, and analysing users' experiences in more depth.

It sought to answer the fourth study question, 'to what extent do Libyan university students find it easy to use the Internet to satisfy their needs? The students' ability to gratify their needs online did not seem to be affected by differences in gender or area of residence. First, the findings indicate that 87.9% of respondents found navigating the Internet easy, while the rest noted some difficulties. Second, women found it easier to satisfy their needs, and the urban sample found it easier to satisfy their needs than did the rural sample. The biggest difference was between men and women in rural areas: men found it slightly harder to use the Internet than did women, which shows that women have more ability to use the Internet.

There were several obstacles which respondents encountered in Internet use. First, Internet connection price was noted as an obstacle by more than half of the respondents. Various kinds of control and monitoring were noted by more than one third of the samples, and other obstacles were identified by another third of the samples as being an obstacle to using the Internet. Second, more women than men saw Internet connection price as an obstacle: about half the women and less than half of the men saw this as an obstacle, with about a 10% difference between the genders. Women felt that control and monitoring was an obstacle more than men did, with a similar difference of nearly 10%. Third, the significant difference between the urban and rural respondents was their perception of control and monitoring as an obstacle, with a difference of 13%. Also about a quarter of both area samples reported experiencing other types of obstacles.

The fifth study question asked, 'for what purposes do Libyan universities students use the Internet, and what needs do they satisfy online?' Twelve suggested purposes and gratifications were identified, including social, cultural and political needs, as well as study factors. Respondents were asked to answer questions choosing options on a five-point Likert scale. First, with regard to social factors, the findings show that the majority of respondents agree and strongly agree with the statement that they use the Internet to connect with their friends, to share information and to avoid social monitoring. This desire to avoid social monitoring was the same in both areas and for both genders. Second, with regard to cultural factors, the majority of respondents agree and strongly agree that they use the Internet to obtain various types of information, to find information about other cultures and to read and watch videos about different subjects and for entertainment. No statistically significant differences between the genders or areas were noted. Third, regarding political factors, users go online

to express their opinions, to find political news and to follow local and world news, with the majority of samples agreeing and strongly agreeing with these statements, with no statistically significant variations for gender or area. In addition, the findings show that personal factors also motivate Internet use and that satisfying needs was of high importance to all the respondents. No statistically significant differences were observed between men and women respondents, or between residents of rural and urban areas. The fact that there is no difference is important in our study.

5.5 Chapter summary

This chapter has presented and explored the data by providing a descriptive analysis that included the demographic characteristics of the respondents, specifically their gender and area of residence. Furthermore the analysis used descriptive percentages alongside Chi-square tests as the main analytical methods and supported this analysis with the complementary data derived from the interviews and thematic analysis. In order to achieve the research aim and objectives and thus answer the research questions, the analysis noted that the study questionnaires provided a satisfactory level of validity and reliability after applying the capability of instrument test.

5.5.1 First: Levels of Internet use and measurement of use experience

This conclusion responds to the first study objective which is 'to assess the surveyed university students' use of the Internet and describe any differences between urban and rural areas and between the genders'. This was achieved by answering three study questions.

In response to Research Question 1, 'how many young Libyan people own computers and to what extent do they use the Internet?' It was concluded that most of the surveyed Libyan university students own a computer at home, and both men and women and urban and rural respondents' own computers to a similar extent. Overall, these results represent initial evidence that a majority of Libyan families with children of university age own a computer. Moreover, the study investigated to what extent the Internet is used, and users' experience of using the Internet, including how long they have been using it for, the amount of time they spend online per week and per day and what kinds of connection they prefer.

Research Question 2 asked 'how much experience do Libyan university students have of using the Internet?' Nearly half of them have been using the Internet for 1-3 years, more than one third for 4-6 years and nearly a quarter for more than 6 years. Again, no difference was noticed between genders although more women than men had been using the Internet for more than 6 years. This concurred with many of the results of previous studies. Furthermore, urban area respondents have around 10% more experience of using the Internet than rural area ones.

More than two thirds of the respondents use the Internet every day, with women doing so more than men and the rest use it 3-5 times a week. No difference was noted between urban and rural students. More than half of the Libyan university students use the Internet for 1-3 hours every day, a quarter of

them use it for 3-5 hours a day, and the other quarter more than 5 hours a day, with no differences between genders or areas of residence.

The study also investigated the kind of connection used and to what extend the Internet is used at home. About 90% of the students use an Internet connection at home, with women in both areas using it more than men, while no difference was noted between areas of residence. More than one third of respondents use a mobile phone connection, with women using it more than men, and urban respondents using it more than their rural counterparts. One third of the sample use cybercafé connections, with male and rural respondents being more likely to do so than female and urban respondents. Very few respondents from both areas of residence and genders use university laboratories and libraries.

In response to Research Question 3, **'**are there any difficulties in using the Internet and what obstacles are encountered?' It was concluded that more than two thirds of the sample had not experienced obstacles in using the Internet, with no difference between the genders and with only a 3% difference between the areas of residence. More than half of the respondents noted that the price of connection was an issue, with women doing so more than men, but with no difference between areas of living. Financial access (the cost of ICT services relative to annual income) is one of the aspects of digital divide (Wilson, 2006). Nearly a quarter of the respondents noted that control and monitoring are obstacles to their Internet use, and less than a quarter reported other obstacles.

This type of digital divide in terms of financial access can be noted in the results, because more women than men reported the price of connection being an issue, which might relate to their lower income, which influences their ability to go online. Moreover, nearly half of the rural sample reported facing other type of obstacles, in contrast to less than a quarter of the urban sample.

5.5.2 Purposes of use and gratifications of Internet use

The second study objective was 'to assess the respondents' purposes and motivations for using the Internet and the social, cultural, and political needs they gratify online, and to describe any differences between urban and rural areas and between the genders'. Therefore, this objective was achieved by answering three study questions.

In response to Research Question 4, 'to what extent do Libyan university students find it easy to satisfy their needs on the Internet?' It was concluded that the majority of respondents satisfy their needs easily, and only a few have difficulties. Nearly 6% more women reported that they found it easy to satisfy their needs, while there were no differences between urban and rural areas.

In response to Research Question 5, 'what purposes do Libyan university students have when they use the Internet, and what needs do they satisfy online?' It was concluded that the majority of respondents have cultural motivations for use of the Internet, and that they satisfy their cultural needs such as finding various forms of information, including about other cultures and lifestyles, and for

entertainment. No statistically significant differences between genders or areas of residence were found. A majority of respondents use the Internet to satisfy their political needs by expressing their opinions and finding political news and political information from around the world. There were no statistically significant differences between women and men nor between urban and rural areas.

The majority of respondents agree and strongly agree that they use the Internet to satisfy their social needs such as being in contact with their friends, chatting, sharing news and information and overriding any form of social monitoring. There were no differences between genders, but a quarter of the rural sample, compared to that of the urban sample, disagree that they use the Internet to override social control.

Personal purposes were also identified as motivations for using the Internet, and the majority of samples satisfied their personal needs such as studying, relaxing and enjoying their free time, again with no differences between genders or areas of residence.

The next chapter focuses on investigating and evaluating the collected data in order to analyse the anticipated social, cultural, and political impacts of Internet use. It also examines the relationship between online daily interactivity and the potential development of a "new society". It presents an analysis of the main quantitative data that is supported by the complementary qualitative data.

Chapter 6: Online behaviour, online interactions and the potential development of a "new society"

6.1 Introduction

Exploring Libyan students' online behaviour and their online social, cultural and political interactions could help to understand the role of the Internet in users' lives and how it could lead to social change and the development of a new type of society. Some social change theories are concerned with people's behaviour, how they meet their needs and how they do their activities (Stresser and Randall, 1981). This social change is a 'notion of social progress or socio-cultural evolution, the philosophical idea that society moves forward by dialectical or evolutionary means' (Guded, 2014, p.2). The Internet, which allows users a range of social, cultural and political interactions such as reading, writing comments, publishing, listening and watching videos, has media power as a communication tool that might play a role in social change (Kraidy, 2002). It is also influencing users' lives and behaviour in the context of information age and at the time of global village. Therefore, this chapter examines the data to achieve two objectives:

- To explore whether Libyan university students' online interactivity anticipates social, cultural and political impacts on society through the Internet's influence on their lives. Also, to explore users' awareness and the elements that persuades them to browse Internet sites and would help to achieve their goals.
- This study aims to explore the argument that Internet has an influence on society through users' online interactions, to assess users' online behaviour and interaction with Internet content, to measure users' opinions and feelings about the Internet and thereby to know the extent to which they are happy and to which the Internet influences on their lives.

This chapter addresses these study questions in two sections.

- Sections 6.2 analyses the data about the anticipated social, cultural, and political impacts of Internet use.
- Section 6.3 presents the data analysis about online interactions and behaviour and the potential development of a "new society" as a result of use of the Internet.

Qualitative data from the interviews with the parents and media experts and from the thematic analysis is presented in support of the main quantitative data. The analysis is also contextualised in relation to the literature reviewed in chapter 3.

6.2 Anticipated social, cultural and political impacts of Internet use

Social, cultural and political needs might be satisfied through online interactions. Katz and Gurevitch (1973) noted five categories of needs:

> Cognitive needs, including acquiring information, knowledge and understanding; Affective needs, including emotion, pleasure, feelings; Personal integrative needs, including credibility, stability, status; Social integrative needs, including interacting with family and friends, and Tension release needs, including escape and diversion. (Katz and Gurevitch, 1973, p.35)

Through the satisfaction of online needs, media power plays its role in the attitude and behaviour of users. This can be seen in users' daily navigation and favourite sites, and in their choice of content. Media power therefore plays a role in users' awareness of their online behaviour by telling them what they should think about and which is important (i.e. agenda setting). Gitlin, (1980, p, 1) argued that 'people found themselves relying on mass media to provide a conceptualised image of the real world. Therefore, the mass media are stunningly successful in telling us what to think about (Cohen, 1963, p.13). Similarly, the Internet might be a powerful force driving users' behaviour. Couldry et al. (2003) noted that there are five functions of media power: first, news-making, since the media determines what will be news; second, agenda setting, because the media does not just select the news but also selects what is covered; third, interpreting, because the media interprets the news as stories; fourth, socialising, the process by which users learn social and political values through the news, entertainment, sport and advertisements; and fifth, persuading, as the media seeks to influence opinions directly. Thus, Internet use might influence what people think about with its agenda setting function and might also help decide what aspects of a subject are important, because 'the media agenda affects the public agenda, and the public agenda affects the policy agenda' (Littlejohn, 2002, p.320). In this context, respondents were asked questions to examine any potential social, cultural and political impacts of the Internet.

To answer RQ6, RQ7 and RQ8 study questions; this analysis is presented in three stages. The first analyses the findings about the participants' online social, cultural and political interactivities. The second findings are about users' awareness, navigation of sites, favourite sites and the factors that persuade them to navigate sites. The third stage analyses the findings about websites and social media that the respondents frequently use. The main data analysis is supported by the complementary data from interviews and thematic analysis (see section 6.2.9 and 6.2.24).

6.2.1 Online participants' interactions

The literature reported that online activities included five main activities: searching, emailing, chatting, entertainment and online discussion (Shen and Shakir, 2009, p.7). Van Dijk (1997, p.147) defined interactivity 'as the digital media which is more interactive than traditional media; they enable a shift in the balance of power to the user and the side of demand'. Therefore, this question measures

how users' online interactions satisfy their social, cultural and political gratifications (Al-Khauja, 2000, Mourtada and Salem, 2012). Online interactions as a kind of behaviour might be only one impact of the Internet. According to Chung (2007, p.43-61), it is essential to recognise the extent to which the medium allows the participant to modify the content or form of a mediated environment in real time. This phenomenon is further explained by Rafael, (1988), who proposed multiple views: 'contingency view', 'non-interactive', 'reactive' and 'interactive' (cited in Hawkins, Wiemann and Pingree, 1988, p.110-134).

Therefore, the respondents were asked which daily online interactions they use the Internet for. Ten types of online social, cultural and political daily interactions were investigated following the work of Singer (1998), Lin (2001), December (1996) and Kaye (1998). Those online social, cultural and political daily interactions are a form of 'behavioural interactivity' as described by Van Dijk (1997, p.147). This online interactivity is a new type of communication in Arab society that might drive social development: 'communication change and scientific or technological forces change might drive social change' (Inglehart and Welzel, 2005). In order to measures the respondents' daily online interactions, they were asked to rank their agreement with statements on a five-point scale: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4) and "strongly agree" (5). These results were analysed by cross-tabulating the variables of gender and area of residence. The results of the investigation of these ten online social, cultural and political interactivities are described below, followed by an overall evaluation (see also appendix A, section C, pp, 312 -322).

6.2.2 Social online interactions

Online interactions are part of the gratification of social needs, and many authors believe that the uses and gratifications obtained from each interactive media and the social origins of these uses and gratifications need to be precisely identified (Katz, Blumler and Gurevitch, 1974, p.19-32, Morris and Ogan, 1996, p.39-50). Therefore, the Internet may play it's role in developing society: 'three factors including economic, political and culture might effect change in a structure and process' (Leat, 2005, p.4) in users lives and society (see also appendix A, section B, pp, 305 - 311).

6.2.3 Chatting with friends

Chatting with friends online might be a significant issue in daily online behaviour of Libyan university students. The results showed that 44.9% strongly agree and 50.0% of samples agree; 2.4% neither agree nor disagree; and only 1.3% disagree and 1.3% strongly disagree.

Gender and area differences

44.6% of men strongly agree and 51.0% agree that chatting with friends is one of their online interactions, whereas 2% neither agree nor disagree, 1.2% disagree and 1.2% strongly disagree. 45.2% of women strongly agree and 49.3% agree, 2.6% neither agree nor disagree and 1.5% disagree and 1.5% strongly disagree. For area differences; 44.3% of the urban sample strongly agree and 51.4%

agree, but 2.4% neither agree nor disagree, 0.9% disagree and 1.1% strongly disagree. 42.9% of urban men strongly agree and 54.9% agree, 1.6% neither agree nor disagree and 0.0% disagree and 0.5% strongly disagree. Similarly, 45.2% of sampled urban women strongly agree, 49.1% agree, 2.8% neither agree nor disagree, 1.4% disagree, and 1.4% strongly disagree.

Among the rural sample, 47.3% of the sampled men strongly agree, and 45% agree, but 2.3% neither agree nor disagree, 3.1% disagree 2.3% strongly disagree. 49.3% of rural men respondents strongly agree, and 40.3% agree, but 3.0% neither agree nor disagree, 4.5% disagree and 3.0% strongly disagree. In comparison, 45.2% of sampled rural women strongly agree and 50.0% agree, but 1.6% neither agree nor disagree, 1.6% disagree and 1.6% strongly disagree.

Table 6-1: Gender and area Chi: chatting with friends.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Chatting with friends	.490	6.045	4	4	.974	.196

Regarding gender, the value of the coefficient of the Chi-square was .490 and the Sig was .974. For the area variable, the value of the coefficient of the Chi-square was 6.045 and the Sig was .196. These tests showed that no variables had any significant effect on the results.

6.2.4 To escape from social pressures and family and social control

Family and society might control their children in various ways, which leads young users to look forward to escaping from these pressures when they use the Internet. The findings showed that 17.5% of samples strongly agree and 26.8% agree that the Internet allows them to escape, 22.6% neither agree nor disagree, 20.7% disagree and 12.5% strongly disagree.

Gender and area differences

21.1% of the sampled men strongly agree and 22.3% agree, 20.3% neither agree nor disagree, 20.3% disagree and 15.9% strongly disagree. Among the women, 14.9% strongly agree, 30.0% agree, 24.2% neither agree nor disagree, 21.0% disagree and 9.9% strongly disagree. For area differences: 16.3% of the urban sample strongly agree and 26.2% agree, 25.4% neither agree nor disagree. 20.6% disagree and 11.4 strongly disagree. 14.6% of the sampled urban women strongly agree, 28.1% agree, and 26.7% neither agree nor disagree, but 21.0% disagree and 9.6% strongly disagree. Also, 19.0% of sampled urban men strongly agree, 23.4% agree, and 23.4% neither agree nor disagree, but 20.1% disagree and 14.1% strongly disagree.

Moreover, 21.7% of the rural sample strongly agree, 28.7% agree, and 12.4% neither agree nor disagree, but 20.9% disagree and 16.3% strongly disagree. 16.1% of sampled rural women strongly agree, 38.7% agree, and 12.9% neither agree nor disagree, but 21.0% disagree and 11.3% strongly disagree. Similarly, 26.9% of sampled rural men strongly agree, 19.4% agree, and 11.9% neither agree nor disagree, but 20.9% disagree and 20.9% strongly disagree.

The value of the coefficient of the Chi-square for gender was 11.676 and the Sig was .020. For the area categories, the value of the coefficient of the Chi-square was 11.038 and the Sig was .026. This test therefore demonstrated that the results were affected by both variables.

However, a deeper analysis of this result indicates that women were less likely to 'strongly disagree' and more likely to agree than strongly agree. Moreover, women in the rural area agree that they are using the Internet to escape from social pressures and family control more than men. This might because of the traditional cultural and rural society condition as it is stricter than the urban society which is more open than rural society.

Table 6-2: Gender and area Chi: to escape from society pressures.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
To escape from society pressures and family social control	11.676	11.038	4	4	.020	.026

The interviews with the media experts supported these results. One expert noted that ‘with the use of the Internet and online gratification of needs, users are spending most of their daily time online in a virtual society. This makes them far from their real society and it could notice the gap between real life and Internet life which is becoming more and more important for those young users’.

6.2.5 Cultural online interactivities

Online gratification is part of cultural interactions and might drive participants’ behaviour and in turn lead to social change. Satisfaction has long been a key element of interactive group work (Hackman, 1990). Cultural gratification was discussed in the literature review and has been the subject of many previous studies (Fauad, 2009, Quiring, 2009, Abod-her, 2013). Social change refers to any significant alteration in behaviour patterns and cultural values. It also refers to the ‘notion of social progress or socio-cultural evolution which may be driven by cultural, religious, economic, scientific or technological forces’ (Joshua, 2015) (See the tables in appendix A, section C, pp, 312 - 322).

6.2.6 For leisure, entertainment, music, video and games

Leisure, entertainment, music, video and games might be one form of gratification that users might seek online. 19.1% of the sample strongly agree, 53.1% agree that this purpose of Internet use is important, and 8.8% neither agree nor disagree, but 12.5% disagree and 6.6% strongly disagree.

Gender and area differences

19.1% of the female respondents strongly agree, 53.1% agree that they use the Internet for leisure, entertainment, music, video and games, and 8.8% neither agree nor disagree, but 12.5% disagree and 6.6% strongly disagree. 20.5% of the sampled men strongly agree, 53.4% agree, and 8.0% neither agree nor disagree, whereas 15.5% disagree and 6.0% strongly disagree. For area differences: 19.4% of the urban sample strongly agree, 53.4% agree, but 9.7% neither agree nor disagree, 11.0% disagree

and 6.5% strongly disagree. Furthermore, 16.8% of urban men strongly agree, 55.4% agree but 9.2% neither agree nor disagree, 13.0% disagree and 5.4% strongly disagree. Similarly, 21.1% of urban women strongly agree, 52.1% agree but 10.0% neither agree nor disagree, 9.6% disagree and 7.1% strongly disagree.

17.8% of the rural sample strongly agree, 51.9% agree and, while 5.4% neither agree nor disagree; 17.8% disagree and 7.0% strongly disagree. Moreover, 17.9% of rural men strongly agree, 47.8% agree and, 4.5% neither agree nor disagree, 22.4% disagree and 7.5% strongly disagree. By way of comparison, 17.7% of rural women strongly agree, 56.5% agree, but 6.5% neither agree nor disagree 12.9% disagree and 6.5% strongly disagree.

Table 6-3: Gender and area Chi: for leisure, entertainment, music, video and games.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
For leisure, entertainment, music, videos and games	4.672	6.129	4	4	.323	.190

In order to further test the variables, the value for gender of the coefficient of the Chi-square was 4.672 and the Sig was .323. For area, the value of the coefficient of the Chi-square was 6.129 and the Sig was .190. These showed that no variables affected the results.

6.2.7 To gain knowledge about other cultures

Other cultures might be of interest when navigating the Internet. 32.2% of the sample strongly agree, 54.9% agree that this was important but 8.6% neither agree nor disagree, 3.0% disagree and 1.3% strongly disagree.

Gender and area differences

33.1% of the men strongly disagree, and 54.6% agree, while 8.8% neither agree nor disagree; 2.4% disagree and 1.2% strongly disagree. Moreover, 31.5% of sampled women strongly agree, 55.1% agree and while 8.5% neither agree nor disagree; 3.5% disagree and only 1.5% strongly disagree. For area differences: 30.3% of the urban sample strongly agree and 55.1% agree, while 9.9% neither agree nor disagree, and 3.0% disagree and 1.7% strongly disagree. Moreover, 32.1% of urban men strongly agree, 53.2% agree and, while 10.3% neither agree nor disagree, 2.7% disagree and 1.6% strongly disagree. Furthermore, 29.2% of urban women strongly agree and 56.2% agree, while 9.6% neither agree nor disagree, but 3.2% disagree and 1.8% strongly disagree.

38.8% of rural samples strongly agree and 54.3% agree but 3.9% neither agree nor disagree and 3.1% disagree. 35.8% of rural men strongly agree, 58.2% agree, but 4.5% neither agree nor disagree, 1.5% disagree. 41.9% of rural women strongly agree and 50.0% agree, but 3.2% neither agree nor disagree and 4.8% disagree.

Table 6-4: Gender and area Chi: to gain knowledge about other cultures.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To gain knowledge about other cultures	.797	8.479	4	4	.939	.075

The value of the gender coefficient of the Chi-square was .797 and the Sig was .939. For area, the value of area the Chi-square was 8.47 and the Sig was .075. It appeared that neither variable affected the results.

6.2.8 To find answers to any questions

Libyan students might use the Internet to answer questions for social, cultural, political or educational purposes. 43.7% of the sample strongly agree and 52.1% agree that they use the Internet to find answers to questions, 1.7% neither agree nor disagree, and only 0.8% disagree and 1.7% strongly disagree.

Gender and area differences

44.8% of the sampled men strongly agree, 50.8% agree, while 2.4% neither agree nor disagree, but 0.0% disagree and 2.0% strongly disagree. Similar results emerged for women: 42.9% strongly agree and 53.1% agree, but 1.2% neither agree nor disagree, only 1.5% disagree and 1.5% strongly disagree. Moreover, for area differences: 40.5% of the rural sample strongly agree 57.8% agree and 1.6% neither agree nor disagree. 37.9% of rural men strongly agree, 60.6% agree and 1.5% neither agree nor disagree. As for rural women, 43.5% strongly agree, 54.8% agree and 1.6% neither agree nor disagree.

In urban areas, 44.5% of the samples strongly agree and 50.5% agree that they navigate web sites to find answers to questions. 1.7% neither agree nor disagree, but 1.1% disagree and 2.2% strongly disagree. 47.3% of urban men strongly agree and 47.3% agree, while 2.7% neither agree nor disagree; only 2.7% strongly disagree. Also, 42.7% of urban women strongly agree and 52.7% agree; 1.1% neither agree nor disagree, and 1.8% disagree and 1.8% strongly disagree.

Table 6-5: Gender and area Chi: to find answers to any questions.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To find answers to any questions	5.469	5.903	4	4	.242	.206

The gender value of the coefficient of the Chi-square is 5.469 and the Sig is 0. 242.The area value of the coefficient of the Chi-square as 5.903 and the Sig was .206.These results show that neither gender nor area affected the results.

This result is consistent with the interviews with the media experts, who noted that 'the Internet role can be seen through user's online interactivities with the Internet content, the Internet brings new information for those Arab people who live in countries with a closed regime and traditional society.

6.2.9 Political online interactions

Satisfaction of political needs is an online interaction that might drive participants' behaviour and consequently impact on society at large. Political gratification might be satisfied by allowing freedom of speech, following local and international news and expressing opinions, as noted by Allagui and Kuebler (2011), Al-Saidy and Al-Guery (2008), Stepanova (2010), Zoda (2011), Al-Raood (2012), Abod-her (2013) and Quiring (2009). It is a part of social behaviour that might be influenced by the use of the Internet when participants become more active and have the opportunity to do and think what they want (See the tables in appendix A, section C, pp, 312 - 322).

6.2.10 To enjoy more freedom of speech and express my opinions

The Internet as a new form of communication technology enables users to cross the borders of censorship, governmental monitoring and societal control, and therefore freedom is one form of gratification which users might be looking for from their online activities. 36.7% of sample strongly agree, 44.3% agree that their online activities are motivated by a desire for increased freedom of speech and to express their opinion. While 11.8% neither agree nor disagree. Only 4.7% disagree and 2.5% strongly disagree.

Gender area differences

The findings showed that 39.0% of the men strongly agree and 41.4% agree, while 10.8% neither agree nor disagree, 5.2% disagree and 3.6% strongly disagree. Of the sampled women, 35.0% strongly agree and 46.4% agree, 12.5% neither agree nor disagree, and 4.4% disagree and 1.7% strongly disagree. For area differences: 34.4% of the urban sample strongly agree and 46.5% agree, while 12.5% neither agree nor disagree; 4.5% disagree and 2.2% strongly disagree. Moreover, 35.3% of urban men strongly agree, 44.6% agree, and 12.5% neither agree nor disagree, but 4.3% disagree and 3.3% strongly disagree. 33.8% of sampled urban women strongly agree, 47.7% agree, and 12.5% neither agree nor disagree, but 4.6% disagree and 1.4% strongly disagree.

Among rural respondents, 45.0% strongly agree, 36.4% agree, and 9.3% neither agree nor disagree, but 5.4% disagree and 3.9% strongly disagree. 49.3% of sampled rural men strongly agree, 32.8% agree, and 6.0% neither agree nor disagree, but 7.5% disagree and 4.5% strongly disagree. Similarly, 40.3% of sampled rural women strongly agree, 40.3% agree, and 12.9% neither agree nor disagree, but 3.2% disagree and 3.2% strongly disagrees.

Table 6-6: Gender and area Chi: to enjoy more freedom of speech.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To enjoy more freedom of speech and express my opinion	3.968	7.696	4	4	.410	.103

The gender value of the coefficient of the Chi-square was 3.968 and the Sig as .410, and the area value of the coefficient of the Chi-square was .7968 and the Sig was .103. Thus, neither variable affected the results.

6.2.11 To receive news about the world

News from around the world is of great interest to Libyan university students. The findings showed that 37.0% of the sample strongly agreed, 56.6% agree, and 3.9% neither agree nor disagree that they browse the Internet to find out world news, but 1.0% disagree and 1.5% strongly disagree.

Gender and area differences

56.4% of the women strongly agree, 56.0% agree, and 5.5% neither agree nor disagree, but 0.9% disagree and 1.5% strongly disagree. 38.2% of the sampled men strongly agree, 57.4%agree, and 1.6% neither agree nor disagree, but 1.2% disagree and 1.6% strongly disagree. Moreover, for area differences; 36.8% of the urban sample strongly agree, 56.3% agree, and 4.7% neither agree nor disagree, but 0.9% disagree and 1.3% strongly disagree. Moreover, 34.9% of the sampled urban women strongly agree, 56.6% agree, and 6.4% neither agree nor disagree, but 1.1% disagree and 1.1% strongly disagree. Similarly, 39.7% of urban men strongly agree, 56.0% agree and 2.2% neither agree nor disagree, but 0.5% disagree and 1.6% strongly disagree.

In addition, 38.0% of the rural sample strongly agrees, 57.4% agree, and 0.8% neither agree nor disagree, but 1.6% disagree and 2.3% strongly disagree. Moreover, 41.9% of sampled rural women strongly agree, 53.2% agree, and 1.6% neither agree nor disagree, but 0.0% disagree and 3.2% strongly disagree. Similarly, 34.3% of sampled rural men strongly agree, 61.2% agree and, 3.0% disagree and 1.5% strongly disagreed.

Table 6-7: Gender and area Chi: to receive news about the world.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
To receive news about the world	6.214	5.324	4	4	.184	.256

The gender value of the coefficient of the Chi-square was 6.214 and the Sig was .184, and the area value of the coefficient of the Chi-square was .5324 and the Sig was .256. These showed that neither variable affected the results.

6.2.12 To follow local and international news

Local and international news might be of great interest to university students. The findings noted that 32.8% strongly agree that they use the Internet to follow local and international news, 49.3% agree and 9.9% neither agree nor disagree, but 5.6% disagree and 2.4% strongly disagree.

Gender and area differences

32.7% of the sampled women strongly agree, 47.5% agree, and 12.0% neither agree nor disagree, but 6.1% disagree and 1.7% strongly disagree. In comparison, 33.1% of the sampled men strongly agree, 51.8% agree, and 7.2% neither agree nor disagree, but 4.5% disagree and 3.2% strongly disagree. For area differences: 32.0% of the urban sample strongly agree, 50.1% agree, and 9.9% neither agree nor disagree, but 5.6% disagree and 2.4% strongly disagree. Moreover, 31.7% of urban women strongly agree, 47.2% agree, and 12.5% neither agree nor disagree, but 6.4% disagree and 2.1% strongly disagree. 32.6% of urban men strongly agree, 54.3% agree, and 6.0% neither agree nor disagree, but 4.3% disagree and 2.7% strongly disagree.

Also, 35.7% of the rural samples strongly agree, 46.5% agree, and 10.1% neither agree nor disagree, but 5.4% disagree and 2.3% strongly disagree. 37.1% of sampled rural women strongly agree, 48.4% agree, and 9.7% neither agree nor disagree, but 4.8% disagree. 34.3% of sampled rural men strongly agree, 44.8% agree and 10.4% neither agree nor disagree, but 6.0% disagree and 4.5% strongly disagree.

Another test was done to verify the results. The gender value of the coefficient of the Chi-square was 5.622 and the Sig was .229, and the area value of the coefficient of the Chi-square was .729 and the Sig was .948. This test showed that both gender and area did not affect the results.

Table 6-8: Gender and area Chi: to follow local and international news.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
To follow local and international news	5.622	.729	4	4	.229	.948

The thematic analysis supported these results: ‘in the last ten years, use of the Internet has played an important role in Libya where young people have the opportunity to go online and browse multi kinds of sites and also have their own sites. Those users of the Internet were online enemies of Gaddafi’s regime and they developed their ability of political behaviour on the web by writing, publishing on the web’ (Almansori, 2012).

6.2.13 Personal online interactivities

Personal and educational needs might be satisfied through online interactions and may form one of the influences of the Internet on their lives (See the tables in appendix A, section C, pp, 312 - 322).

6.2.14 To help me do my homework

Educational purpose might be gratified online. The findings show that 28.1% of participants strongly agree, 47.0% agree that they use the Internet to do their homework, and 10.1% neither agree nor disagree, while 9.8% disagree and 5.1% strongly disagree.

Gender and area differences

23.6% of sampled women strongly agree, 50.1% agree, and 11.1% neither agree nor disagree, but 10.5% disagree and 4.7% strongly disagree. Similarly, the findings show that 34.3% of the sampled men strongly agree, 42.6% agree, and 8.8% neither agree nor disagree, but 8.8% disagree and 5.6% strongly disagree. For area differences: 28.8% of the urban sample strongly agree, 45.6% agree, and 10.1% neither agree nor disagree, but 10.3% disagree and 5.2% strongly disagree. Furthermore, 37.0% of urban men strongly agree, 39.7% agree, and 8.7% neither agree nor disagree, but 9.8% disagree and 4.9% strongly disagree. Similarly, 23.5% of sampled urban women strongly agree, 49.5% agree, and 11.0% neither agree nor disagree, but 10.7% disagree and 5.3% strongly disagree.

Also, 25.6% of the rural sample strongly agree, 51.9% agree, and 10.1% neither agree nor disagree, but 7.8% disagree and 4.7% strongly disagree. 26.9% of sampled rural men strongly agree, 50.7% agree, and 9.0% neither agree nor disagree, but 6.0% disagree and 7.5% strongly disagree. 24.2% of sampled rural women strongly agree, 53.2% agree, and 11.3% neither agree nor disagree, but 9.7% disagree and 1.6% strongly disagree.

Table 6-9: Gender and area Chi: to help to do my homework.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
To help me do my homework	9.040	2.200	4	4	.060	.699

The gender value of the coefficient of the Chi-square was 9.040 and the Sig was .060. The area value of the coefficient of the Chi-square was 2.200 and the Sig was .699. Thus it appeared that neither variable affected the results.

6.2.15 For my personal needs

Young Libyan people might navigate the Internet to gratify their personal needs such as conducting intimate romantic relationships. The findings noted that 21.2% of the sample strongly agree, 54.9% agree, and 14.1% neither agree nor disagree, but 6.9% disagree and 2.9% strongly disagree.

Gender and area differences

19.1% of men strongly agree, 57.8% agree, and 13.5% neither agree nor disagree, whereas 6.8% disagree and 2.8% strongly disagree. Of the sampled women, 22.7% strongly agree, 52.8% agree, and 14.6% neither agree nor disagree, but 7.0% disagree and 2.9% strongly disagree. For area differences, the findings show that 20.9% of the urban sample strongly agree, 54.0% agree, and 14.6% neither agree nor disagree, but 7.5% disagree and 3.0% strongly disagree. 21.7% of urban women strongly

agree, 53.7% agree, and 14.6% neither agree nor disagree, but only 6.8% disagree and 3.2% strongly disagree. Similarly, 19.6% of urban men strongly agree, 54.3% agree, and 14.7% neither agree nor disagree, but 8.7% disagree and 2.7% strongly disagree.

22.5% of rural respondents strongly agree, 58.1% agree, and 12.4% neither agree nor disagree, but 4.7% disagree and 2.3% strongly disagree. 27.4% of rural women strongly agree, 48.4% agree, and 14.5% neither agree nor disagree, whereas 8.1% disagree and 1.6% strongly disagree. Also, 17.9% of the sampled rural men strongly agree, 67.2% agree, and 10.4% neither agree nor disagree, but 1.5% disagree and 3.0% strongly disagree.

Table 6-10: Gender and area Chi: for personal needs.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
For my personal needs	1.682	2.165	4	4	.794	.705

The gender value of the coefficient of the Chi-square was 1.682 and the Sig was .794, and the area value of the coefficient of the Chi-square was 2.165 and the Sig was .705. Thus neither variable affected the results.

The results of this section are supported by the thematic analysis, which found that 'personal needs such as sexual online relationships and navigating sexual sites is common and young people aged between 12-30 years old are sometimes interested in these sites. Also, having relationships with friends from other gender is easy on the web and users do not be shy because they can use fake name' (Al-Boraehi, 2011).

The results outlined above answer survey question: 11 (see appendix A, section C) show that:

- The majority of respondents display an interest in satisfying social, cultural, political and personal gratifications and satisfying personal needs.
- The average level of social, cultural, and political online interactions is high among both genders and areas, and very few significant differences were observed between any of the variables. The differences were noted to be in the degree of agreeing (strongly agree / agree) and some in the degree of disagreeing (strongly disagree / disagree), it is not differences between agreement and disagreement. The fact that there is no difference between men and women in this context is an important finding.
- Therefore, these results are consistent with other studies of online social, cultural and political interactivity, which has been categorized into four types: 'one to one email, many to many, one to one or one to few or one to many, many to one – one to one and one to many' (Busis, 1999, p.387). As has been described, in interactivity theory the mechanism of agenda setting has been identified: it emanates from the side of creators, whose media productions may exert

great influence on audiences, and creates the possibility that interactive media might facilitate major changes in social life.

- These results show that the process of interactivity through new technologies has given the Internet an important role as a new communication in social change by narrowing in some way the gaps of digital divide between universities students' genders and locations.

6.2.16 Awareness and willingness to engage in navigation of the Web

The following sections examine the media role of the Internet in the context of participants' awareness, willingness to use the Internet and how it can gratify their needs. Agenda setting theory might play and important role in determining users' awareness, which is here investigated through questions about the participants' favourite sites and what persuades them to browse them. Agenda setting here determines participants' awareness and what they want to find out, as well as their online browsing and interaction habits (Dunleavy and Weir, 1998).

6.2.17 Favourite websites that you regularly browse

Navigating the Internet is a daily activity that includes browsing many different sites. Some researchers claim that users' online habits might improve their experience and online interactivity (Chen and Wells, 1999, Ko et al., 2005). The sample were asked if they have favourite sites that they regularly visit and given three choices of response (yes, no or do not know). 42.7% of the respondents have favourite sites which they browse every day, 21.5% have no favourite and 35.8% said they do not know.

Gender and area differences

The findings show that 39.5% of men respondents have favourite sites which they regularly visit, but 22.6% have no favourites, while 37.9% do not know. Among the women respondents, 45.2% have favourite sites, but 20.6% do not and 34.2% do not know. For area differences; 44.2% of the urban sample have favourite sites that they regularly visit, 22.7% have no favourites and 33.1% do not know. Further analysis showed that 41.4% of urban men in the sample have favourite sites, 24.3% do not and 34.3% do not know. Moreover, 46.1% of women in urban areas have favourite sites which they visit regularly, 21.6% do not and 32.3% do not know.

37.5% of the rural sample has favourite's websites, 17.2% do not and 45.3% do not know. Of rural men, 34.3% have favourite sites, 47.8% do not know and17.2% have no favourite websites. 41.0% of rural women have favourite sites, 42.6% do not know and 16.4% do not. Table 6-11 summarises these results.

Table 6-11: Favourite websites that you regularly browse

	Yes %	**No 5**	**Don't know 5**
Men	39.5	22.6	37.9
Women	45.2	20.6	34.2
Overall	42.7	21.5	35.8
Urban sample / Tripoli university			
Men	41.4	24.3	34.3
Women	46.1	21.6	32.3
Overall	44.2	22.7	33.1
Rural sample / Azzawya university			
Men	34.3	17.9	47.8
Women	41.0	16.4	42.6
Overall	37.5	17.2	45.3

The value of the coefficient of the Chi-square for gender was 1.928 and the Sig was .381. This means that gender had no statistically significant effect on the results. For area, the value of the coefficient of the Chi-square as 1.187 and the Sig was .552, also indicating that the variable had no statistically significant effect on the results.

Table 6-12: Gender and area Chi: do they have a site they visit every day.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Do they have a site they visit every day?	1.928	1.187	2	2	.381	.552

The results answer survey question: 12, Table 6-11 show that:

- Less than half the respondents answered that they do not know whether they have favourite sites or not. There is little difference between the respondents living in rural and urban areas.
- Both men and women have similar results when reporting that they do not know whether they had favourite sites which they visit regularly, although more men than women claimed to be unsure. No differences were found between men or women in both types of residential area.
- Respondents in both areas produced similar results when asked about favourite sites which they visit every day, with approximately one quarter of both groups claiming not to have any favourite sites.
- Having favourite sites that are regularly browsed might be a result of the first level of agenda setting, therefore, the media 'may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its reader what to think about' (Cohen, 1963, p.13).

6.2.18 Browsing special sites every day to satisfy needs

Browsing special sites every day is one way in which users can achieve their aim of finding the content they want and engaging in interactions they enjoy, and it might reflect the process of agenda setting. Therefore, users' daily online habits might seek to satisfy their social, cultural and political needs, as discussed by Al-Khauja (2000), Mourtada and Salem (2012), Allagui and Kuebler (2011), Sonaike (2004), Hamdi (2010), (2010), Louis (2003), Al-Saidy and Al-Guery (2008), Al-Shaebany (2007), and Stepanova (2010), all of whom showed evidence of the influence of the Internet. The sample were asked whether they have one or more site that they visit every time they use the Internet and given the options of answering yes, no or not often. The results show that 64.3% of the sample browsed special websites every day and 25.4% did this infrequently, but 10.0% did not.

Gender and area differences

65.1% of male respondents have special sites that they browse every day, 23.3% do not often browse special sites and 11.6% do not have any frequently browsed sites. Similarly, 64.2% of the sampled women do have such sites, 27.0% browse such sites infrequently and 8.8% do not have any. For area differences: 63.6% of the urban sample browses a special website every day, 25.7% do, but not often, and 10.6% do not. 62.6% of the urban men noted that they browse special websites every day, 24.2% infrequently browse special websites and 13.2% do not ever. 64.3% of urban women browsed special sites, 8.9% do not and 26.8% do infrequently.

Table 6-13: Browsing special sites everyday

	Yes %	**No %**	**Not often %**
Men	65.1	11.6	23.3
Women	64.2	8.8	27.0
Overall	64.3	10.0	25.4
Urban sample / Tripoli university			
Men	62.6	13.2	24.2
Women	64.3	8.9	26.8
Overall	63.6	10.6	25.7
Rural sample / Azzawya university			
Men	71.6	7.5	20.9
Women	63.9	8.2	27.9
Overall	68.0	7.8	24.2

Among the rural samples, 68.0% browse special websites every day, 7.8% do not and 24.2% do infrequently. Also 71.6% of rural men browse special websites, 20.9% browse them infrequently and 7.5% do not browse them. Moreover, 36.9% of rural women browse special sites, 8.2% do not and 27.9% do infrequently. Table 6-13 summarises these details.

Table 6-14: Gender and area Chi: do they have a site they visit every day.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Do they have a site they visit every day?	1.928	1.187	2	2	.381	.552

For gender, the value of the coefficient of the Chi-square was 1.928 and the Sig was .381, showing no statistically significant differences between the genders. Similarly, for area, the value of the coefficient of the Chi-square was 1.187 and the Sig was .552, again showing that the variable did not affect the results.

The results answer survey question: 13, Table 6-13 shows that:

- More than two thirds of the respondents browse special sites, with no statistically significant differences between male and female respondents.
- Samples in both areas of residence browsed special websites similar amounts, but men in rural areas are more interested in browsing special websites. There is a little difference between women in both areas, with women in rural areas being slightly less interested in browsing special sites than their urban counterparts.
- A quarter of respondents do not browse special sites every day, with the same range being noted in both areas of residence, and for both men and women.
- The role of the Internet can be seen in Internet power, which might lead the participants to browse special sites every day. This could be the work of the agenda setting process, which causes some sites to be trusted or thought about more than others.

6.2.19 Factors persuading participants to browse a site

Users might be attracted to sites by their title or content, while the second level of the agenda setting process might play its role in deciding what parts of the subject are important (Rogers and Dearing, 1988). The title or content of a site, (such as social media, Google, news websites etc.), influences how users relate to the Internet when seeking to gratify their needs. The elements which persuade users to go to special sites every day show users' level of awareness (Abod-her, 2013) and interest, which could be one type of the Internet's influence. The sample were asked what persuaded them to browse a site and given three answer options: the publisher or title of site, the content of the site or both. The findings show that both the title and the content of a website persuade 59.4% of respondents to browse it, 37.0% mention the content and 3.6% say that only the title of the website influences them.

Gender and area differences

Among the sampled men, 59.0% are interested in both the title and content of websites, 36.1% are interested in the content, but 4.8% are interested only in the name. The women in the sample are

similar: 59.6% are interested in title and content, 37.7% in the content, and 2.7% only in the name. For area differences: 58.7% of the urban sample noted that both the title and content of the website persuaded them to navigate a site, 37.5% answered that content is important to them, while 3.8% answered that the title alone persuaded them. Both title and content persuade 58.8% of urban men, 35.7% are interested in the content and 5.5% are interested in the title. Both title and content attract 58.7% of urban women, 38.7% are interested in the content and 2.5% are only interested in the title.

Among the rural respondents, 61.7% agreed that both title and content persuade them, 35.2% said that content is important and 3.1% answered that the title alone attracts them. Furthermore, 59.7% of rural men are persuaded by title and content, 37.3% by only the content and 3.0% only by the title. 63.9% of rural women are persuaded by title and content, 32.2% by the content and 3.3% by only the title. Table 6-15 summarises these findings:

Table 6-15: Factors persuading prticipants to browse sites

	Title of website %	Content %	Both %
Men	4.8	36.1	59.0
Women	2.7	37.7	59.6
Overall	3.6	37.0	59.4
Urban sample / Tripoli university			
Men	5.5	35.7	58.8
Women	2.5	38.7	58.7
Overall	3.8	37.5	58.7
Rural sample / Azzawya university			
Men	3.0	37.3	59.7
Women	3.3	32.2	63.9
Overall	3.1	35.2%	61.7

For gender, the value of the coefficient of the Chi-square was 1.846 and the Sig was .397.This result showed that gender did not have any significant effect on the results. Regarding the variable of residential area, the value of the coefficient of the Chi-square was .531 and the Sig was .767. Therefore, this variable had no statistically significant effect on the results.

Table 6-16: Gender and areas Chi: factors persuading users to browse a site.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Factors persuading users to browse a site	1.846	.531	2	2	.397	.767

These results measure three important factors regarding respondents' awareness of their online activity and are confirmed by the interviews conducted with parents. One of the parents noted that 'their young children gain experience of Internet use quicker and they are being able to navigate, write, and publish what they want easily on the web'. Similarly, one of the Arab media experts argued

that ‘young people day after day gain experience of browsing sites and thus dynamically build their daily agenda. This gradually improving relationship with Internet content gives greater opportunities to users and produces an increasing influence on participants’ lives’. This supported the main finding and confirms the ability of young people to conduct their behaviour on the Web.

The results answer survey question: 14. Table 6-15 show that:

- More than half the Libyan university students surveyed are interested in the content and title of sites, with no statistically significant differences between genders or areas of residence.
- Female participants in rural areas are more interested in the title and content of sites than sampled urban women, but sampled men in both areas are quite similarly interested.
- Respondents from both genders and different areas of residence are aware of the content of sites which they browse, because the majority of them are persuaded by both the title and content.
- Therefore, Internet content ensures media role, which influences the attitudes and behaviours of users, as can be seen in users’ daily navigation and favourite sites, and their choices regarding the content and title of sites. It can influence their awareness of online behaviour by telling them what they should think about and what is important (Rogers and Dearing, 1988). The process of agenda setting in the context of Internet power has two levels: first, it identifies the importance of the issues which influences users’ favourite sites and daily browsing; second, it analyses whether the issues discussed in the media are having an impact on the way that the public thinks and thereby persuading users to browse sites by making them more interested in it (Rogers and Dearing, 1988).

6.2.20 Websites and social media which participants navigate

Users’ online interactions are conducted by browsing many different sites, which might include email, Google, YouTube, social media such as Facebook, Skype and other sites such as commercial, news, music and sports sites. According to Castells (2007), the variety of social software and tools now available has provoked the development of an interactive communication network. Thus, users’ actions bring them into contact with varied content such as text, graphics, animation, video, audio and games (Bucy, 2004). This can be achieved on different sites such as social media, email and other type of sites. These kinds of interaction were noted as parts of young people’s online behaviour (Al-Khauja, 2000, Alghalban, 2007, Al-Saidy and Al-Guery, 2008, Abo-Harara, 2010, Ziany, 2010, Shen and Shakir, 2012). The sample were asked to describe the extent to which they use ten sites on a five-point scale (“Never” (0), “Rarely” (1), “Sometimes” (2), “Very often” (3) and “Always” (4)). The findings are presented as percentages and analysed in relation to the study variables of gender and area of residence. (See the tables in appendix A, section C, pp, 312 -322).

6.2.21 Accessing emails

One online activity could be sending and receiving of emails, so the sample were asked about their extent of email use. The results showed that 37.4% of the sample always accessed emails, 30.7% very often, 12.5% sometimes, 10.2% rarely and 9.2% never.

Gender and area difference

Among the male respondents, 35.7% always access emails, 28.9% very often, 12.9% sometimes, 11.2% rarely and 11.2% never. 38.6% of the sampled women samples always access emails, 32.0% very often, 12.2% sometimes, 9.5% rarely and 7.7% never. For area differences; 36.0% of the urban sample always access emails, 31.0% very often, 13.3% sometimes, 11.4% rarely and 8.3% never. Moreover, 38.4% of the urban women always access emails, 32.2% very often, 12.0% sometimes, 10.1% rarely and 7.2% never. Also, 32.4% of urban men always access emails, 29.1% very often, 15.4% sometimes, 13.2% rarely and 9.9% never.

Among the rural sample, 42.2% always access emails, 29.7% very often, 9.4% sometimes, 6.3% rarely and 12.5% never. Moreover, 44.8% of men in the rural sample noted that they always access emails, 28.4% very often, 6.0% sometimes, 6.0% rarely, and 14.9% never. In addition, 39.3% of the sampled rural women always access emails, 31.1% very often, 13.1% sometimes, 6.6% rarely and 9.8% never.

Table 6-17: Gender and area Chi: accessing emails.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Accessing emails	3.183	5.978	4	4	.528	.201

The value of the coefficient of the Chi-square for gender was 3.183 and the Sig was .528, which showed that gender did not significantly affect the results. For area of residence, the value of the Chi-square was 5.978 and the Sig was .201, which also means that this variable did not affect the results.

6.2.22 Messenger and Skype

When it comes to using Messenger and Skype, 15.7% of the sample always access these services, 22.1% very often, 13.8% sometimes, 23.0% rarely and 25.4% never.

Gender and area differences

Among the sampled men, 13.7% always access these services, 20.9% very often, 10.4% sometimes, 26.5% rarely and 28.5% never. Of the women sampled 17.2% always use these services, 23.1% very often, 16.3% sometimes, 20.4% rarely and 23.1% never. For area differences; 14.4% of the urban samples always access Skype and Messenger, 23.7% very often, 15.0% sometimes, 22.4% rarely and 24.4% never. 11.5% of the sampled urban men always use these sites, 22.0% very often, 12.6% sometimes, 26.4% rarely and 27.5% never, compared with the sampled urban women, 16.2% of whom always use these sites, 24.9% very often, 16.6% sometimes, 19.9% rarely and 22.4% never.

In addition, 20.3% of the rural sample always uses Skype and Messenger, 16.4% very often, 9.4% sometimes, 25.0% rarely and 28.9% never. 19.4% of rural men always use these services, 17.9% very often, 4.5% sometimes, 26.9% rarely and 31.3% never, while 21.3% of rural women always access them, 14.8% very often, 14.8% sometimes, 23.0% rarely and 26.2% never.

Table 6-18: Gender and areas Chi: Messenger and Skype.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Messenger and Skype	8.951	7.127	4	4	.062	.129

For gender, the value of the coefficient of the Chi-square was 8.951 and the Sig was .062, which means that gender did not affect the results. For area, the value of the coefficient of the Chi-square was 7.127 and the Sig was .129, which shows that area also did not affect the results significantly.

6.2.23 YouTube

YouTube might be one of users' online activities. The respondents' answers show that 21.0% always access YouTube, 28.4% very often, 21.7% sometimes, 16.6% rarely and 12.4% never.

Gender and area differences

The results show that 17.2% of men samples always access YouTube, 27.6% very often, 18.8% sometimes, 22.4% rarely and 14.0% never. In comparison, 23.8% of the women said that they always access YouTube, 29.0% very often, 23.8% sometimes, 12.3% rarely and 11.1% never. For area differences; 22.5% of the urban sample always access YouTube, 28.9% very often, 20.1% sometimes, 17.5% rarely and 11.0% never. Furthermore, 15.8% of sampled urban men always access YouTube, 27.9% very often, 19.7% sometimes, 24.0% rarely and 12.6% never. By way of comparison, 26.8% of urban women always use YouTube, 29.6% very often, 20.4% sometimes, 13.2% rarely and 10.0% never.

Among the rural sample, 15.6% always use YouTube, 26.6% very often, 27.3% sometimes, 13.3% rarely and 17.2% never. 20.9% of rural men always use YouTube, 26.9% very often, 16.4% sometimes, 17.7 rarely and 17.9% never. 9.8% of rural women always access YouTube, 26.2% very often, 39.3% sometimes, 8.2% rarely and 16.4% never.

Table 6-19: Gender and area Chi: accessing YouTube

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
YouTube	14.489	9.049	4	4	.006	.063

For gender, the value of the coefficient of the Chi-square was 14.489 and the Sig was .006, which means that the results were quite affected by gender difference. For area, the value of the coefficient of the Chi-square was 9.049 and the Sig was .063, so area did not affect the results.

6.2.24 Facebook

Facebook, as a form of social media, is widely used by Libyan university students. The findings show that 76.3% of the samples always navigate Facebook, 9.9% very often, 4.7% sometimes, 3.7% rarely and 5.4% never.

Gender and area differences

The results also show that 75.2% of the sampled men always access Facebook, 10.8% very often, 5.2% sometimes, 5.2% rarely and 3.6% never. Among the sampled women, 77.1% always use Facebook, 9.1% very often, 4.4% sometimes, 2.6% rarely and 6.7% never. For area differences; 77.3% of the urban sample always uses Facebook, 9.5% very often, 3.9% sometimes, 3.7% rarely and 5.6% never. Furthermore, 77.9% of urban women always use Facebook, 8.6% very often, 3.9% sometimes, 2.9% rarely and 6.8% never. In comparison, 76.5% of urban men always access Facebook, 10.9% very often, 3.8% sometimes, 4.9% rarely and 3.8% never.

Furthermore, 72.7% of the rural samples always use Facebook, 10.9% very often, 7.8% sometimes, 3.9% rarely and 4.7% never. 73.8% of rural women always navigate Facebook, 11.5% very often, 6.6% sometimes, 1.6% rarely and 6.6% never. 71.6% of rural men always use Facebook, 10.4% very often, 9.0% sometimes, 6.0% rarely and 3.0% never.

Table 6-20: Gender and areas Chi: accessing Facebook.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Facebook	5.871	3.853	4	4	.209	.426

For gender, the value of the coefficient of the Chi-square was 5.871 and the Sig was .209 which showed that gender did not significantly affect the results. For area, the value of the coefficient of the Chi-square was 3.853 and the Sig was .426, which also means that the results were not significantly affected by the area of residence.

The thematic analysis supported these results: ‘the rise of use of the Internet is happening with the appearance of social media, Facebook in the last decade is playing the important role in the wide Arab Internet use’ (Yemeress, 2014). The interviews with media experts also supported this result: one of the media experts said, ‘the influence of the Internet can be seen in young people’s heavy use of social media; they are online anywhere and doing something online’.

6.2.25 Accessing academic websites

University students might use the Internet for their studies. The findings show that 39.7% of the samples always navigate academic websites, 31.1% very often, 14.5% sometimes, 9.1% rarely and 5.6% never.

Gender and area differences

The results showed that 46.3% of the sampled men always access academic websites, 30.1% very often, 9.3% sometimes, 9.3% rarely and 4.9% never. Also, 34.8% of the sampled women always access these sites, 31.9% very often, 18.3% sometimes, 8.8% rarely and 6.2% never. For area differences: 38.7% of the urban sample always navigate academic websites, 31.1% very often, 14.2% sometimes, 9.6% rarely and 6.3% never. Moreover, 45.8% of sampled urban men always navigate academic websites, 30.7% very often, 8.9% sometimes, 8.4% rarely and 6.1% never. Also, 34.2% of sampled urban women always access these sites, 31.3% very often, 17.6% sometimes, 10.4% rarely, and 6.5% never.

43.0% of the rural sample always navigate academic websites, 31.3% very often, 15.6% sometimes, 7.0% rarely and 3.1% never. 47.8% of rural men always browse academic websites, 28.4% very often, 10.4% sometimes, 11.9% rarely and 1.5% never. In comparison, 37.7% of rural women always navigate academic websites, 34.4% very often, 21.3% sometimes, 1.6% rarely and 4.9% never.

Table 6-21: Gender and area Chi: accessing academic websites.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Accessing academic websites	13.244	3.364	4	4	.010	.499

For gender, the value of the coefficient of the Chi-square was 13.244 and the Sig was .010, so gender had a significant effect on the results: men are likely to be more interested in accessing academic web sites. For area, the value of the coefficient of the Chi-square was 3.364 and the Sig was .499, which means that there was no statistically significant effect of area.

6.2.26 Google

Most of the sampled Libyan university students use Google: 76.7% of participants always do so, 12.9% very often, 6.5% sometimes, 1.9% rarely and 2.0% never.

Gender and area differences

77.8% of sampled women always use Google, 10.9% very often, 6.8% sometimes, 2.4% rarely and 2.1% never. Of the sampled men, 75.2% always access Google, 15.6% very often, 6.0% sometimes, 1.2% rarely and 2.0% never. For area differences; 78.3% of the urban samples always use Google, 12.1% very often, 5.2% sometimes, 2.2% rarely and 2.2% never. 79.9% of urban women always browse Google, 9.7% very often, 6.1% sometimes, 2.5% rarely and 1.8% never. In comparison, 76.0% of urban men always access Google, 15.8% very often, 3.8% sometimes, 1.6% rarely and 2.7% never.

70.9% of the rural sample always browse Google, 15.7% very often, 11.0% sometimes, 0.8% rarely and 1.6% never. Moreover, 68.3% of rural women always browse Google, 16.7% very often, 10.0%

sometimes, 1.7% rarely and 3.3% never. Among the rural men samples, 73.1% always access Google, 14.9% very often, 11.9% sometimes, 0.0% rarely and 0.0% never.

Table 6-22: Gender and area Chi: accessing Google

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Google	3.729	7.964	4	4	.444	.093

For gender, the value of the coefficient of the Chi-square was 3.729 and the Sig was .444, which means that the results were not affected by gender. For area, the value of the coefficient of the Chi-square was 7.964 and the Sig as .093, which shows that the results were not affected by the area variable.

6.2.27 Accessing commercial and shopping sites

Shopping and commercial sites might be of interest to Libyan university students. The findings noted that only 12.8% of samples always browse these types of websites, 18.0% very often, 13.3% sometimes, 21.3% rarely and 34.5% never.

- Gender and area differences

11.3% of sampled men always navigate commercial and shopping sites, 14.9% very often, 12.1% sometimes, 23.8% rarely and 37.5% never. 13.8% of sampled women always navigate commercial sites, 20.3% very often, 14.1% sometimes, 19.4% rarely and 32.4% never. For area differences: 12.0% of the urban sample always browse commercial sites, 19.6% very often, 13.7% sometimes, 20.4% rarely and 34.1% never. Moreover, 8.8% of urban men samples always browse shopping sites, 15.5% very often, 12.7% sometimes, 22.7% rarely and 39.8% never. Also, 14.0% of sampled urban women always access these sites, 22.2% very often, 14.3% sometimes, 19.0% rarely and 30.5% never.

15.6% of the rural sample always navigates commercial sites, 12.5% very often, 11.7% sometimes, 24.2% rarely and 35.9% never. 17.9% of the sampled rural men always navigate shopping sites, 13.4% very often, 10.4% sometimes, 26.9% rarely and 31.3% never. In comparison, 13.1% of the sampled rural women always navigate commercial sites, 11.5% very often, 13.1% sometimes, 21.3% rarely and 41.0% never.

Table 6-23: Gender and area Chi: accessing commercial and shopping sites.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Access social and shopping sites	5.504	5.198	4	4	.239	.268

For gender, the value of the coefficient of the Chi-square was 5.504 and the Sig was .239, meaning that gender did not affect the results. For area, the value of the coefficient of the Chi-square was 5.198 and the Sig was .268, which means that area also did not significantly affect the results.

6.2.28 Accessing international and Libyan news

University students might use the Internet to find international and Libyan news. The findings show that 36.9% of the sample always go online for such news, 23.9% very often, 14.0% sometimes, 14.3% rarely and 10.6% never.

Gender and area differences

The results show that 37.6% of the sampled women always find news online, 26.8% very often, 12.1% sometimes, 14.4% rarely and 9.1% never. 35.8% of sampled men always navigate international and Libyan news sites, 19.9% very often, 16.7% sometimes, 14.2% rarely and 12.6% never. For area differences, the findings show that 34.5% of the urban samples always navigate international and Libyan news sites, 22.7% very often, 15.1% sometimes, 15.5% rarely and 11.8% never. 30.7% of urban men always visit international and Libyan news sites, 18.4% very often, 18.4% sometimes, 16.2% rarely and 15.1% never. In comparison, 36.9% of urban women always go online to find international and Libyan news, 25.4% very often, 12.9% sometimes, 15.1% rarely and 9.7% never.

45.3% of the rural samples always search for international and Libyan news, 28.1% very often, 10.2% sometimes, 10.2% rarely and 6.3% never. 49.3% of sampled rural men always find news online, 23.9% very often, 11.9% sometimes, 9.0% rarely and 6.0% never. Furthermore, 45.3% of sampled rural women always use the Internet to find international and Libyan news, 28.1% very often, 10.2% sometimes, 10.2% rarely and 6.3% never.

Table 6-24: Gender and area Chi: accessing international and Libyan news.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Accessing international and Libyan news	7.503	11.457	4	4	.112	.022

For gender, the value of the coefficient of the Chi-square as 7.503 and the Sig was .112, showing that gender did not affect the results. For area, the value of the coefficient of the Chi-square was 11.457 and the Sig was .022, showing that the results were affected by area: the rural sample are likely more interested than the urban sample in accessing international and Libyan news sites.

6.2.29 Accessing sports and music websites

Online activities might include accessing sports and music sites. The findings show that 26.3% of the sample always access these sites, 28.0% very often, 18.9% sometimes, 15.1% rarely and 11.7% never.

Gender and area differences

The results show that 27.6% of sampled women always access these sites, 30.0% very often, 19.9% sometimes, 13.6% rarely and 8.9% never. 24.5% of the sampled men always do, 25.3% very often, 17.6% sometimes, 17.1% rarely and 15.5% never. For area differences; 26.3% of the urban sample always access sports and music websites, 26.1% very often, 19.1% sometimes, 17.1% rarely and 11.4% never. Furthermore, 29.6% of sampled urban women always do this, 26.7% very often, 20.2%

sometimes, 15.2% rarely and 8.3% never. In comparison, 21.2% of sampled urban men always navigate these sites, 25.1% very often, 17.3% sometimes, 20.1% rarely and 16.2% never.

26.2% of the rural sample always browse these sites, 34.9% very often, 18.3% sometimes, 7.9% rarely and 12.7% never. Moreover, 18.3% of rural women samples always navigate these sites, 45.0% very often, 18.3% sometimes, 6.7% rarely and 11.7% never. 33.3% of sampled rural men always navigate sport and music sites, 25.8% very often, 18.2% sometimes, 9.1% and 13.6% never.

Table 6-25: Gender and area Chi: accessing sport and music websites.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Accessing sport and music websites	8.477	8.612	4	4	.076	.072

The gender value of the coefficient of the Chi-square as 8.477 and the Sig was .076, while the area value of the coefficient of the Chi-square was 8.612 and the Sig as .072. This means that neither gender nor area significantly affected the results.

6.2.30 Going online for personal needs

Libyan university students might be interested in their personal needs when they go online and therefore access personal needs sites. Of the sample, 12.8% always browse personal needs sites, 16.7% very often, 17.4% sometimes, 20.1% rarely and 33.0% never.

Gender and area differences

The results show that 13.1% of sampled men always browse personal needs sites, 12.7% very often, 17.1% sometimes, but 15.9% rarely and 41.2% never. 12.7% of sampled women always do this, 19.6% very often, 17.5% sometimes, 23.3% rarely and 26.9% never. For area differences: 12.3% of urban samples always browse personal needs sites, 15.8% very often, 18.8% sometimes, 20.3% rarely and 32.8% never. 12.4% of sampled urban men always browse personal needs sites, 10.7% very often, 18.0% sometimes, 15.7% rarely and 43.3% never. Furthermore, 12.2% of sampled urban women always browse personal needs sites, 19.3% very often, 19.3% sometimes, 23.3% rarely and 25.9% never.

In rural areas, 14.8% of those sampled always browse personal needs sites, 19.5% very often, 12.5% sometimes, 19.5% rarely and 33.6% never. Moreover, 14.9% of sampled rural men always browse personal needs sites, 17.9% very often, 14.9% sometimes, 16.4% rarely and 35.8% never. 14.8% of sampled rural women always browse personal needs sites, 21.3% very often, 9.8% sometimes, 23.0% rarely and 31.1% never.

Table 6-26: Gender and area Chi: going online for personal needs sites.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Going online for personal needs sites	16.691	3.398	4	4	.002	.494

For gender, the value of the coefficient of the Chi-square was 16.691 and the Sig was .002, whereas for area, the value of the coefficient of the Chi-square was 3.398 and the Sig was .494. Therefore, gender affected the results, but area did not.

6.2.31 Twitter

Twitter was not a popular online activity in the samples' Internet use. 22.4% of the sample never browses Twitter, 46.7% rarely, 21.7% sometimes, but only 1.9% always and 7.3% very often.

Gender and area differences

The results showed that 23.5% of sampled men never access Twitter, 47.4% rarely, 20.6% sometimes, 1.6% always and 6.9% very often. Of the sampled women, 21.5% never use Twitter, 46.2% rarely, 22.2% sometimes, 2.2% always and 7.7% very often. For area differences; in urban areas, 21.7% of the samples never use Twitter, 46.3% rarely, 21.8% sometimes, 5.9% very often and 4.3% always. Moreover, 22.8% of sampled urban men never browse Twitter, 46.1% rarely, 22.8% sometimes, 3.5% always and 6.9% very often. 20.9% of sampled urban women never browse Twitter, 46.4% rarely, 23.2% sometimes, 1.5% always and 8.0% very often.

In rural areas, 24.8% of the samples never browse Twitter, 48.1% rarely, 17.0% sometimes, 3.9% always and 6.2% very often. 25.4% of men in rural areas never browse Twitter, 50.7% rarely, 17.6% sometimes, 0.3% always and 6.0% very often. There was little difference among the rural women samples: 24.2% never browse Twitter, 45.2% rarely, 21.0% sometimes, 4.8% always and 4.8% very often.

Table 6-27: Gender and area Chi: accessing Twitter.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Twitter	.828	4.937	4	4	.935	.294

The gender value of the coefficient of the Chi-square was .828 and the Sig was .935, and the area value of the coefficient of the Chi-square was 4.937 and the Sig was .294. These results confirmed that neither variable randomly affected the results. This will not change the side of analysis of results about Twitter navigation noted to be unpopular in the daily Internet use of the university students. However, gender and area that affected results appeared because 7.7% of women very often navigate Twitter more than 6.9% of men and 3.5% of urban men navigate Twitter more than 0.3% of rural men. These regarding the average of the data analysis led to note Twitter as unpopular in the university students' lives, even though small random gender and area differences appeared in 'always' and 'very often' scales options.

The results of data analysis answer survey question: 15 (see appendix A, section C) show that:

- The majority of the sample access the Internet in order to use email, social media sites such as Facebook, Messenger and Skype, YouTube, academic sites, international and Libyan news sites, and leisure sites such as sports and music sites.
- The majority of the sample also very rarely access commercial sites or Twitter.
- No statistically significant differences were noticed between gender categories in the use of these sites. Moreover, no statistically significant differences were noticed between area categories in the use of these sites.
- Facebook and Google are of particular interest to most respondents.
- These results support the idea that social networks provide clues about what people are reading, listening to or watching (1st level) to achieve personal gratification when they interact online and influence their perceptions of what is important (2nd level) (McCombs, Shaw and Weaver, 1997, p.407). Van Dijk (2006a, p.9) called this 'behavioural interactivity', which he defined 'as the digital media which is more interactive than traditional media; they enable a shift in the balance of power to the user and the side of demand'.

6.2.32 Summary of research results on social, cultural and political impacts.

Section 6.2 has looked at Libyan university students' use of the Internet. It has dealt with the anticipation of the role of the Internet on users through social, cultural and political gratifications and other online interactions which reveal the role of communication in social change. These sections have presented the findings about the ways in which participants describe their online interactivities and the three study questions that were evaluated in this section.

They have addressed RQ 6, 'which online interactions do Libyan universities students engage in and to what extent they are interested in social, cultural and political content?' They have presented findings which investigate the extent to which the students engage in social, cultural and political online interactivities. The analysis aimed to understand which online activities users engage in when they go online and to what extent social, cultural and political factors are of interest to them in order to understand the social change brought about by the Internet through agenda setting in the context of online interactivity:

1. First, social interactions were of great interest to the students, who frequently go online to chat with friends, and form an important part of their online behaviour.
2. Second, the respondents access the Internet for online cultural interactivities such as leisure, entertainment, music and games, and to obtain new ideas and answers to their questions. The majority of the sample ranked culture as a high-interest activity; there were no differences between the genders or areas.

3. Third, regarding online political interactions, the findings show that freedom of speech, following international and local news and discussing multiple issues with friends are of high interest to the sample group, with no statistically significant differences noticed between areas or genders.

Other factors including study and personal needs were noted to be strong motivations for online activities and again no statistically significant differences were noted between genders or areas.

The section also addressed study question 7, 'what relationship is there between users' awareness and the elements that persuade them to navigate sites, and to what extent are Libyan university students aware of Internet content?' Therefore, measuring the awareness of users and their online interactivities would help to understand the role of the Internet on respondents' lives as a kind of media role. In order to demonstrate the awareness of Libyan university students, samples answered questions about their online map, favourite sites and what persuades them to navigate sites.

1. First, the results show that nearly half of the respondents have favourite sites which they browse, more than a quarter does not, whereas, more than a third were not sure about their response. There were no statistically significant differences between the genders, but a small statistically significant difference was noticed between the areas, with more of the urban than rural sample having favourite sites. Importantly, the rural sample was more uncertain than were the urban sample.
2. Second, the investigation investigated users' awareness by asking them if they browse special sites every day, including social, cultural and political sites. More than two thirds do this, and only a few do not; less than a third does this infrequently. No statistically significant differences were noted between the genders or areas, although there was one slight difference between urban and rural women. The fact that there is no difference is important to notice.
3. Thirdly, regarding what persuades Libyan university students to browse sites, more than half the respondents were interested in both the title and content of the site, and more than a third were interested in only the title. The findings did not note any statistically significant differences between genders or areas. As noted above, these results were also confirmed by the analysis of the interviews with experts, who noted that 'young people day after day gain experience of browsing sites and dynamically build their daily browsing agenda', leading to a gradually improved relationship with Internet content and consequently an increase in its influence on participants' lives'.

Finally section 6.2 addressed RQ 8, 'which sites do users use and navigate and which are most used to gratify their needs?' The respondents were asked about their use of a variety of websites, including email, social media and educational, commercial and news sites. The majority of respondents always or very often use emails, Facebook, Messenger and Skype, academic sites, Google, YouTube,

international and Libyan news and sport and music sites of both genders and in both areas, with the exception of Skype and Messenger, which are not much used in rural areas, international and Libyan news sites, which are more used in rural areas, and YouTube, which urban women are slightly more interested in than are their rural counterparts. These were of great interest to respondents, who claimed that they browse these sites every day. Men are likely to be more interested in browsing academic sites than women. Commercial sites are not of great interest to the sample as part of their daily browsing. As noted above, these results are consistent with the results of the interviews with experts, who pointed out that 'young users are becoming more aware of their daily browsing and they have a personal browsing map. They noted social media as a form of daily online interactivity as a new form of the Internet which includes social, cultural and political content and other online interactivities'.

The next section focuses on this issue in more depth by presenting further data and analysis of daily online interactivity and evidence of the emergence of a new society as a result of the lifestyle changes and translational aspects of the Internet.

6.3 Online interactive behaviour and the potential development of a new society

The second part of this chapter presents an analysis of the finding about online interactive behaviour and the potential development of a new society. This might occur through the influence of the Internet on users. To answer RQ9, and RQ10 study questions, this section analyses first, how Libyan university students interact with Internet content, and second, user's opinion and how they feel about their online interactions. Moreover, this analysis is supplemented with the qualitative data from the interviews with parents and media experts and from the thematic analysis (sees section: 6.3.7 and section 6.3.21). The section aims to provide more in-depth evidence of the role of the Internet in students' lives and to sum up the development of a 'new type of society' (Van Dijk, 1999a, p.23) in the era of information age through use of the Internet (see objectives and study questions, pp, 10/11/12). According to Ogbum (1947), technological developments change our environment to which we, in turn, adapt. The roles of technology in social change which is categorised under three headings: economic, political and cultural (Giddens and Duneier, 2000). Allagui and Kuebler (2011, 5) noted that 'these networks are creating space territories for interaction and strong reciprocity based on an altruistic sharing behaviour.... members of networks created revolutionary content on their digital media and distributed this same content to their friends, families and members of other networks'. Furthermore, Philip (2011) noted that social media played a central role in shaping political debates during the Arab Spring. Political subjects were the main discussion topics of all users, including urban residents and women, both before and during the revolutions, and users clearly aimed to put pressure on the regime by using new communication technologies to obtain democracy.

6.3.1 Online interactive behaviour on the Web

Users might interact with Internet content in multiple ways as they browse sites and follow their interests online. Interactivity was defined by Steuer (1995) as the extent to which the given medium allows users to modify the content of a form of mediated environment in real time (Chung, 2007, p.43-61). The media power of the Internet might allow it to play an agenda-setting role in users' lives: according to Shaw (1979, p.101), 'attitudes and behaviour are usually governed by cognitions –what a person knows, thinks, and believes'. The variety of social software and tools prevailing nowadays has provoked the development of an interactive communications network, as described by Castell (2007). As Van Dijk (2006a, p.147) noted, Internet use is considered a 'behaviour interactivity', and includes browsing sites, writing comments, posting photos, sharing links, sending articles to relatives or friends and interacting with the content. Moreover, satisfaction has long been a key element in interactive group work (Hackman, 1990). Hence, to gratify needs, online interactions must include communication between humans and computers and communication between humans (Rafaeli, 1988, p.110 -134). Uses and gratifications are involved in all forms of interactive media, and their social origins need to be precisely identified (Katz, Blumler and Gurevitch, 1974, p.19-32, Morris and Ogan, 1996, p.39-50). Finally, interactions with Internet content might be social, cultural or political, and this could help researchers to measure the role of Internet content on users' behaviour in these areas.

Therefore, surveys were conducted with respondents to measure how they interact with content when they are online. Seven online behaviours were proposed as 'online interactivities with Internet content' (Busis, 1999, p.385). Respondents were asked to give their opinions using a scale ranging from "never"(0), "rarely"(1), "sometimes"(2), "very often"(3) and "always"(4). Percentages are presented below, followed by an analysis of the study variables (see appendix A, section D, pp, 323 - 336)

6.3.2 Writing comments on social media pages

Writing comments on social media pages such as Facebook might be one of the identified online interactions that is popular with the respondents. The results showed that 39.6% of the sample sometimes do this, 25.1% do it very often, 16.1% always, 14.6% rarely and 4.6% never.

Gender and area differences

Results show that 33.9% of the men sampled sometimes write comments on social media pages, 28.2% very often, 16.5% always, 17.7% rarely and only 3.6% never. On the other hand, 44.1% of the women sample sometimes does this, 22.7% very often, 15.8% always, 12.1% rarely and only 5.3% never. For area differences; the results further show that 40.6% of the urban sample sometimes write comments on social media pages, 26.0% very often, 14.9% always, 14.2% rarely and 4.3% never. Moreover, 36.5% of urban men sometimes write comments, 27.1% very often, 15.5% always, 17.7% rarely and 3.3% never. Among women, 43.5% of urban women sometimes write comments on social media pages, 25.2% very often, 14.5% always, 11.8% rarely and 5.0% never.

36.2% of the rural sample sometimes writes comments on social media pages, 22.0% very often, 20.5% always, 15.7% rarely and 5.5% never. 26.9% of sampled rural men sometimes write comments on social media pages, 31.3% very often, 19.4% always, 17.9% rarely and 4.5% never. 46.7% of rural women samples sometimes do this, 11.7% very often, 21.7% always, 13.3% rarely and 6.7% never.

Table 6-28: Gender and area Chi: writing comments on social media.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Writing comments on social media	9.348	3.399	4	4	.053	.493

For gender, the value of the coefficient of the Chi-square was 9.348 and the Sig was .053, and for areas the value of the coefficient of the Chi-square was 3.399 and the Sig was .493. These show that neither variable significantly affected the results.

6.3.3 Saving or printing out articles

Saving or printing out articles or photos is an online interaction in which users might engage. The findings show that 39.6% of the samples sometimes do this, 18.0% very often, 9.3% always, 18.7% rarely and 14.4% never.

Gender and area differences

The results show that 40.0% of sampled women sometimes save or print articles, 17.8% very often, 6.9% always, 20.3% rarely and 15.0% never. 39.0% of sampled men sometimes do this, 18.3% very often, 12.4% always, 16.0% rarely and 13.7% never. For area differences; the findings also show that 40.0% of the urban sample sometimes save articles or print them out, 17.5% very often, 9.4% always, 19.3% rarely and 13.8% never. Moreover, 39.6% of the sampled urban women do this sometimes, 18.5% very often, 6.5% always, 21.5% rarely and 13.8% never. 40.6% of sampled urban men sometimes do this, 16.0% very often, 13.7% always, 16.0% rarely and 13.7% never.

Table 6-29: Gender and area Chi: saving or printing out articles.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Saving or printing out articles	5.832	1.401	4	4	.212	.844

Furthermore, 38.1% of the rural sample sometimes save or print out articles, 19.8% very often, 8.7% always, 16.7% rarely and 16.7% never. The results also show that 41.7% of sampled rural women sometimes save or print out articles, 15.0% very often, 8.3% always, 15.0% rarely and 20.0% never. Similarly, 34.8% of sampled rural men sometimes save or print out articles, 24.2% very often, 9.1% always, 18.2% rarely and 13.6% never.

The gender value of the coefficient of the Chi-square was 5.8320 and the Sig was .212, and the area value of the coefficient of the Chi-square was 1.401 and the Sig was .844. Thus, neither variable affected the results.

6.3.4 Reading longer articles

Reading longer articles might be online interactions when users are interested in a particular issue. The findings show that 23.2% of the sample always read longer articles, 29.9% very often, 34.2% sometimes, 8.8% rarely and 3.9% never.

Gender and area differences

20.4% of sampled women always read longer articles, 32.7% very often, 33.3% sometimes, 8.2% rarely and 5.3% never. 26.7% of sampled men noted that they always read longer articles, 26.3% very often, 35.2% sometimes, 9.7% rarely and 2.0% never. For area differences, the results show that 22.1% of the urban sample always read longer articles, 32.0% very often, 34.0% sometimes, 8.2% rarely and 3.7% never. Moreover, 18.6% of sampled urban women always do this, 35.7% very often, 33.3% sometimes, 7.4% rarely and 5.0% never. In comparison, 27.2% of sampled urban men said that they always read longer articles, 26.7% very often, 35.0% sometimes, 9.4% rarely and 1.7% never.

26.8% of the rural sample always read longer articles, 22.8% very often, 34.6% sometimes, 11.0% rarely and 4.7% never. Furthermore, 28.3% of sampled rural women always read longer articles, 20.0% very often, 33.3% sometimes, 11.7% rarely and 6.7% never. 25.4% of sampled rural men always also read longer articles, 25.4% very often, 35.8% sometimes, 10.4% rarely and 3.0% never.

Table 6-30: Gender and area Chi: reading longer articles.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Reading longer articles	8.719	5.100	4	4	.069	.277

The gender value of the coefficient of the Chi-square was 8.719 and the Sig was .069, and the area value of the coefficient of the Chi-square was 5.100 and the Sig was .277. These show that neither variable had an effect on the results.

6.3.5 Watching videos

Watching videos might be one of the users' online interactions. The results show that 12.5% of the sample always watches videos, 21.3% very often, 36.6% sometimes, 19.7% rarely and 10.0% never.

Gender and area differences

The results show that 15.3% of the sampled women always watch videos, 19.9% very often, 35.5% sometimes, 19.0% rarely and 10.3% never. 8.9% of the sampled men always do this, 23.0% very often, 37.9% sometimes, 20.6% rarely and 9.7% never. For area differences; 12.2% of the urban sample always watches videos, 21.9% very often, 37.3% sometimes, 18.8% rarely and 7.9% never. 15.7% of urban women always watch videos, 21.5% very often, 34.9% sometimes, 18.0% rarely and 10.0% never. In comparison, 7.2% of urban men always watch videos, 22.7% very often, 40.9% sometimes, 19.9% rarely and 9.4% never.

13.4% of the rural sample always watches videos, 18.9% very often, 33.9% sometimes, 22.8% rarely and 11.0% never. Moreover, 13.3% of rural women always watch online videos, 13.3% very often, 38.3% sometimes, 23.3% rarely and 11.7% never. Also, 13.4% of rural men always watch videos, 23.9% very often, 29.9% sometimes, 22.4% rarely and 10.4% never.

Table 6-31: Gender and area Chi: watching videos.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Watching videos	5.637	2.176	4	4	.228	.703

The gender value of the coefficient of the Chi-square was 5.637 and the Sig was .228, and the area value of the coefficient of the Chi-square was 2.176 and the Sig was .703. These confirm that neither variable affected the results.

6.3.6 Sending articles or videos to friends

Users' interaction on the web might include exchanging ideas with online friends by, for example, exchanging online articles or videos. The results show that 15.9% of the samples always do this, 22.4% very often, 37.4% sometimes, 13.6% rarely and 10.8% never.

Gender and area differences

The results show that 16.6% of the sampled women always send articles or videos to friends, 22.9% very often, 39.2% sometimes, 13.5% rarely and 7.8% never. 14.9% of sampled men always do this, 21.8% very often, 35.1% sometimes, 13.7% rarely and 14.5% never. For area differences: 15.0% of the urban sample always sends articles or videos to friends, 23.4% very often, 37.3% sometimes, 12.7% rarely and 11.6% never. 15.8% of urban women always send articles and videos to their friends, 23.6% very often, 37.5% sometimes, 14.7% rarely and 8.5% never. In comparison, 13.8% of urban men always send articles or videos to friends, 23.2% very often, 37.0% sometimes, 9.9% rarely and 16.0% never.

Table 6-32: Gender and area Chi: sending articles or videos to friends.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Sending articles or videos to friends	6.749	3.935	4	4	.150	.415

18.9% of the rural sample always sends articles or videos to friends, 18.9% very often, 37.8% sometimes, 16.5% rarely and 7.9% never. Moreover, 20.0% of rural women always send articles and videos to their friends, 20.0% very often, 46.7% sometimes, 8.3% rarely and 5.0% never. Also, 17.9% of rural men always send articles or videos to friends, 17.9% very often, 29.9% sometimes, 23.9% rarely and 10.4% never.

The gender value of the coefficient of the Chi-square was 6.749 and the Sig was .150, and the area value of the coefficient of the Chi-square was 3.935 and the Sig was .415. These tests demonstrate that neither variable affected the results.

6.3.7 Re-publishing articles or videos on their own social media page

Internet users often re-publish articles and videos which they are interested in on their social media pages. The results show that 13.5% of the sample always re-publishes articles and videos on their own pages, 22.8% very often, 32.2% sometimes, 16.1% rarely and 15.4% never.

Gender and area differences

14.4% of the sampled women always do this, 20.7% very often, 32.9% sometimes, 15.7% rarely and 16.3% never. 12.2% of the sampled men always re-publish articles and videos on their own page, 25.6% very often, 31.3% sometimes, 16.7% rarely and 14.2% never. For area differences, the findings show that 13.2% of the urban sample always re-publish articles and videos on their pages, 22.4% very often, 34.0% sometimes, 15.8% rarely and 14.6% never. Moreover, 14.7% of urban women always re-publish articles and videos on their own pages, 19.7% very often, 34.4% sometimes, 15.1% rarely and 16.2% never. 11.2% of urban men always do this, 26.3% very often, 33.5% sometimes, 16.8% rarely and 12.3% never.

In addition, 14.2% of the rural samples always re-publish articles and videos on their own pages, 24.4% very often, 26.0% sometimes, 17.3% rarely and 18.1% never. 13.3% of rural women were always re-publish articles and videos on their own pages, 25.0% very often, 26.7% sometimes, 18.3% rarely and 16.7% never. In comparison, 14.9% of rural men always re-publish articles and videos on their own pages, 23.9% very often, 25.4% sometimes, 16.4% rarely and 19.4% never.

Table 6-33: Gender and area Chi: re-publishing articles or videos on my social media pages.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Re-publishing articles or videos on my social media pages	2.569	2.782	4	4	.632	.595

The gender value of the coefficient of the Chi-square was 2.569 and the Sig was .632, and the area value of the coefficient of the Chi-square was 2.782 and the Sig was .632. These confirm that neither variable affected the results.

The results answer survey question: 16 (see appendix A, section D). The analysis of data showed:

- The participants interact with Internet content by writing, watching, listening, posting, sending articles to friends, publishing and following content on social media.
- Women interact with Internet content in the same way as men.
- Rural and urban university students interact with Internet content, in the same ways.
- Therefore, these results are consistent with the idea that the attitudes and behaviours of users are influenced by Internet interactivity and by Internet agenda-setting. If the creator of the content is itself a gatekeeper, it has additional agenda-setting control on access to news, information and entertainment (Wilson et al., 2001, p.14).

- This suggests support for the assertion by Giddens and Duneier (2000) that online behaviour plays a role in economic, political and cultural social change. Miege (1997, p.140) emphasised that 'the communication activities of the social actors in relation to their life experiences and to a public place of argument, debate and social exchanges which are more and more stilted.

These results are supported by the thematic analysis, which noted that 'in the first month of the Libyan war strong attack on the Libyan Gaddafi regime was done by Internet users through social media by publishing videos, photos and writing news and comments' (Almansori, 2012). Also, another article indicated 'the collaboration between Tunisian and Egyptian cyber-activates so widely celebrated in the press and other media; also, they supported each other through publishing photos and videos' (Morozov, 2011).

6.3.8 Participants' opinions about the Internet

Young people are ever more involved in new communications technologies, especially the Internet, which has exerted a profound influence on their life, according to McCombs (2005) who noted that agenda-setting effects exist on the Internet. Therefore, the respondents were asked to rank ten proposed opinions using a five-point Likert scale of "strongly disagree", "disagree", "neither agree nor disagree", "agree" and "strongly agree" (see the tables in appendix A, section D). The percentages are analysed according to the study variables of gender and area difference using the Chi-square test.

6.3.9 The Internet is open and makes it easy to communicate with the world

Libyan university students might find that the Internet offers free and open communication with the world. The findings show that 39.7% of the samples strongly agree with this statement, 53.6% agree and 4.0% neither agree nor disagree, but only 1.7% strongly disagree and 1.0% disagree.

Gender and area differences

34.4% of the sampled men strongly agree, 57.8% agree and 4.1% neither agree nor disagree, but only 2.0% agree and 1.6% strongly disagrees. 43.5% of the sampled women strongly agree, 50.5% agree and 3.9% neither agree nor disagree, but 0.3% disagrees and 1.8% strongly disagrees. For area differences: 40.5% of the urban sample strongly agree that they find the Internet to be open and free, 52.8% agree, but only 1.3% strongly disagree and 0.7% disagree. 45.5% of the sampled urban women strongly agree, 49.1% agree and 4.4% neither agree nor disagree, but only 0.0% disagree and 1.5% strongly disagree. Similarly, 33.7% of urban men strongly agree, 58.4% agree and 5.1% neither agree nor disagree, but only 1.7% disagree and 1.1% strongly disagree.

In the rural area, 36.7% of the samples strongly agree that they find the Internet to be open and free, 56.3% agree and 1.6% neither agrees nor disagree, but only 2.3% agree and 3.1% strongly disagree. 37.1% of rural women strongly agree, 56.5% agree and 1.6% neither agree nor disagree, but only

1.6% disagree and 3.2% strongly disagree. Similarly, 36.4% of rural men strongly agree, 56.1% agree and 1.5% neither agree nor disagree, but only 3.0% disagree and 3.0% strongly disagree.

Table 6-34: Gender and area Chi: the Internet is easy and open communication with the world.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
The Internet is easy and open to communicate with the world	8.541	7.780	4	4	.074	.100

The gender value of the coefficient of the Chi-square was 8.541 and the Sig was .074, and the area value of the coefficient of the Chi-square as 7.780 and the Sig was .100. These show that neither variable affected the results.

6.3.10 The Internet as a means of entertainment

The Internet may be seen by young Libyans as a means of entertainment. The findings show that 14.6% of the sample strongly agrees with this idea, 39.2% agree and 7.1% neither agree nor disagree, but 27.2% disagree and 12.0% strongly disagree.

Gender and area differences

13.8% of the sampled men strongly agree, 39.4% agree and 4.5% neither agree nor disagree, but 30.1% disagree and 12.2% strongly disagree. Similarly, 15.1% of the sampled women strongly agree, 39.0% agree and 9.1% neither agree nor disagree, but 27.2% disagree and 11.8% strongly disagree. For area differences: 15.6% of the urban samples strongly agree, 44.3% agree and 7.3% neither agree nor disagree, but 22.7% disagree and 10.0% strongly disagree. Moreover, 16.3% of the sampled urban women strongly agree, 43.0% agree and 8.9% neither agree nor disagree, but 21.9% disagree and 10.0% strongly disagree. In comparison, 14.5% of urban men strongly agree, 46.4% agree and 5.0% neither agree nor disagree, but 24.0% disagree and 10.1% strongly disagree.

In the rural area, 10.9% of the sample strongly agrees, 21.1% agree and 6.3% neither agree nor disagree, but 43.0% disagree and 18.8% strongly disagree. Furthermore, 9.8% of rural women strongly agree, 21.3% agree and 9.8% neither agree nor disagree, but 39.3% disagree and 19.7% strongly disagree. 11.9% of rural men strongly agree, 20.9% agree and 3.0% neither agree nor disagree, but 46.3% disagree and 17.9% strongly disagree.

Table 6-35: Gender and area Chi: the Internet as a means of entertainment.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
The Internet as a means of entertainment	5.675	36.457	4	4	.225	.000

The gender value of the coefficient of the Chi-square as 5.675 and the Sig was .225, and the area value of the coefficient of the Chi-square was 36.457 and the Sig was .000. This test showed that area

variable affected the results: the urban sample view use of the Internet as a means of leisure and entertainment more than do rural participants.

6.3.11 The Internet is a means of modern life

The Internet is a means of modern life that might influence users' lives. The findings show that 44.9% of the sample strongly agrees, 49.1% agree and 4.0% neither agree nor disagree, but only 1.0% disagree and 0.9% strongly disagree.

Gender and area differences

44.7% of the sampled women strongly agree, 51.1% agree and 3.3% neither agree nor disagree, but 0.9% disagree and 0.0% strongly disagree. 45.3% of the sampled men strongly agree, 46.5% agree and 4.9% neither agree nor disagree, but only 1.2% disagree and 2.1% strongly disagree. For area differences: 46.4% of the urban sample strongly agree, 47.7% agree and 4.3% neither agree nor disagree, but only 0.9% disagree and 0.7% strongly disagree. 46.4% of urban women strongly agree, 49.4% agree and 3.4% neither agree nor disagree, but 0.7% disagree and 0.0% strongly disagree. Men in urban areas are similar: 46.3% strongly agree, 45.2% agree and 5.6% neither agree nor disagree, but 1.1% disagrees and 1.7% strongly disagrees.

39.8% of the rural sample strongly agrees, 53.9% agree and 3.1% neither agree nor disagree, but only 1.6% disagree and 6% strongly disagree. 42.4% of rural men strongly agree, 50.0% agree and 3.0% neither agree nor disagree, but only 1.5% disagrees and 3.0% strongly disagree. Similarly, among rural women, 37.1% strongly agree, 58.1% agree and 3.2% neither agree nor disagree, but only 1.6% disagree and 0.0% strongly disagree.

Table 6-36: Gender and area Chi: the Internet is a means of modern life.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
The Internet is a means of modern life	8.395	3.617	4	4	.78	.460

The gender value of the coefficient of the Chi-square was 8.395 and the Sig was .78, and the area value of the coefficient of the Chi-square was 3.617 and the Sig was .460. Thus neither variable affected the results.

6.3.12 The Internet harms local culture

The sample might feel that the Internet harms local culture. The findings show that 8.4% strongly agree, 16.5% agree and 32.2% neither agree nor disagree, but 28.0% disagree and 14.9% strongly disagree.

Gender and area differences

The findings show that 9.8% of the sampled women strongly agree, 17.4% agree and 30.0% neither agree nor disagree, but 26.0% disagree and 16.8% strongly disagree. In comparison, 6.6% of the sampled men strongly agree, 15.2% agree and 35.2% neither agree nor disagree, but 30.7% disagree

and 12.3% strongly disagree. For area differences: the findings show that 9.0% of the urban sample strongly agree that the Internet harms local culture, 14.9% agree and 34.0% neither agree nor disagree, but 27.5% disagree and 14.6% strongly disagree. Moreover, 11.3% of urban women strongly agree, 16.2% agree and 30.8% neither agree nor disagree, but 25.6% disagree and 16.2% strongly disagree. 5.6% of urban men samples strongly agree, 12.9% agree and 38.8% neither agree nor disagree, but 30.3% disagree and 12.4% strongly disagree.

Among the rural sample, 6.3% strongly agree, 22.0% agree and 26.0% neither agree nor disagree, but 29.9% disagree and 15.7% strongly disagree. 3.3% of rural women strongly agree, 23.0% agree and 26.2% neither agree nor disagree, but 27.9% disagree and 19.7% strongly disagree. Of rural men, 9.1% strongly agree, 21.2% agree and 25.8% neither agree nor disagree, but 31.8% disagree and 12.1% strongly disagree.

Table 6-37: Gender and area Chi: the Internet harms local culture.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
The Internet harms local culture	6.420	6.058	4	4	.170	.195

The gender value of the coefficient of the Chi-square was 6.420 and Sig was .170, and the area value of the coefficient of the Chi-square was 6.058 and Sig was .195. These show that neither variable affected the results.

6.3.13 The Internet is a means of communication which harms society

The results of the question about whether the participants feel that the Internet has negative effects on society show that only 8.0% of samples strongly agree, 21.5% agree and 28.0% neither agree nor disagree, but 31.8% disagree and 10.6% strongly disagree.

Gender and area differences

The findings show that only 8.2% of the sampled women strongly agree, 20.5% agree and 29.9% neither agree nor disagree, but 29.9% disagree and 11.2% strongly disagree. The sampled men have similar opinions: 7.8% strongly agree, 22.9% agree and 25.3% neither agree nor disagree, but 34.3% disagree and 9.8% strongly disagree. For area differences: 8.2% of the urban sample strongly agree, 22.9% agree and 29.0% neither agree nor disagree, but 30.3% disagree and 9.6% strongly disagree. 9.3% of urban women strongly agree, 21.9% agree and 30.4% neither agree nor disagree, but 27.8% disagree and 10.7% strongly disagree. 6.7% of urban men strongly agree, 24.6% agree and 26.8% neither agree nor disagree, but 34.1% disagree and 0.0% strongly disagrees.

The findings among the rural sample show that 7.1% strongly agree, 16.5% agree and 24.4% neither agree nor disagree, but 37.0% disagree and 14.2% strongly disagree. Moreover, 3.3% of rural women strongly agree, 14.8% agree and 27.9% neither agree nor disagree, but 39.3% disagree and 13.1% strongly disagree. The rural men are similar: 10.6% strongly agree, 18.2% agree and 21.2% neither agree nor disagree, but 34.8% disagree and 15.2% strongly disagree.

Table 6-38: Gender and area Chi: the Internet is a means of communication which harms society.

	Value		Df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
The Internet is a means of communication which harms society	2.666	7.037	4	4	.615	.134

The gender value of the coefficient of the Chi-square was 2.666 and the Sig was .615, and the area value of the coefficient of the Chi-square was 7.037 and the Sig was .134. This test shows that neither variable affected the results.

6.3.14 The Internet is a tool for studying

Regarding the opinion that the Internet is a tool for studying, the results show that 35.7% of the sample strongly agree, 52.0% agree and 7.1% neither agree nor disagree, but only 3.3% disagree and 1.9% strongly disagree.

Gender and area differences

36.2% of the sampled men strongly agree, 52.8% agree and 5.7% neither agree nor disagree but only 2.8% disagree and 2.4% strongly disagree. In comparison, 35.3% of the sampled women strongly agree, 51.4% agree and 8.2% neither agree nor disagree, but only 3.6% disagree and 1.5% strongly disagrees. For area differences: 34.7% of the urban sample strongly agrees, 53.5% agree and 6.7% neither agree nor disagree, but only 3.1% disagree and 2.0% strongly disagree. Moreover, 34.4% of urban women strongly disagree, 51.5% agree and 8.9% neither agree nor disagree, but only 3.7% disagree and 1.5% strongly disagree. Among urban men, 35.2% strongly agree, 56.4% agree and 93.4% neither agree nor disagree, but 2.2% disagree and 2.8% strongly disagree.

Similarly, 39.1% of the rural sample strongly agrees, 46.9% agree and 8.6% neither agree nor disagree, but only 3.9% disagree and 1.6% strongly disagree. Also, in rural areas 39.3% of women strongly agree, 50.8% agree and 4.9% neither agree nor disagree, but only 3.3% disagree and 1.6% strongly disagree. Similarly, 38.8% of rural men strongly agree, 43.3% agree and 11.9% neither agree nor disagree, but only 4.5% disagree and 1.5% strongly disagrees.

Table 6-39: Gender and area Chi: the Internet is a tool for studying.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
The Internet is a tool for studying	2.194	2.397	4	4	.700	.663

The gender value of the coefficient of the Chi-square was 2.194 and the Sig was .700, and the area value of the coefficient of the Chi-square was 2.397 and the Sig was .663. Thus neither variable affected the results.

6.3.15 The Internet is a means of being more effective

For the opinion that the Internet allows users to be more active in interacting with ideas and events, the findings show that 28.0% of the sample strongly agree with this statement, 50.3% agree and 14.5% neither agree nor disagree, but only 5.4% disagree and 1.8% strongly disagree.

Gender and area differences

The results show that 29.1% of sampled women strongly agree, 51.1% agree and 11.9% neither agree nor disagree, but only 5.5% disagree and 2.4% strongly disagree. Similarly, 26.6% of sampled men strongly agree, 49.2% agree and 18.0% neither agree nor disagree, but only 5.3% disagree and 0.8% strongly disagree. For area differences: 27.8% of the urban sample strongly agree, 51.0% agree and 14.2% neither agree nor disagree, but only 5.2% disagree and 1.8% strongly disagree. 28.6% of urban women strongly agree, 52.6% agree and 10.9% neither agree nor disagree, but only 5.3% disagree and 2.6% strongly disagree. Urban men are similar, with 26.6% strongly agreeing, 48.6% agreeing and 19.2% neither agreeing nor disagreeing, but only 5.1% disagreeing and 0.6% strongly disagreeing.

The findings also show that 28.9% of the rural sample strongly agree, 47.7% agree and 15.6% neither agree nor disagree, but only 6.3% disagree and 1.6% strongly disagree. Moreover, 31.1% of rural women strongly agree, 44.3% agree and 16.4% neither agree nor disagree, but only 6.6% disagree and 1.6% strongly disagree. 26.9% of rural men strongly agree, 50.7% agree and 14.9% neither agree nor disagree, but 6.0% disagree and 1.5% strongly disagree.

Table 6-40: Gender and area Chi: the Internet is a means of being more effective.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
The Internet is a means of being more effective	6.093	.791	4	4	.192	.940

The gender value of the coefficient of the Chi-square was 6.093 and the Sig was .192, while the area value of the coefficient of the Chi-square was .791 and the Sig was .940. Thus, neither variable affected the results.

6.3.16 The Internet is a means of developing society

For the opinion that the spread of Internet use in society might develop society, 38.3% of the sample strongly agree, 48.2% agree and 9.9% neither agree nor disagree, but only 2.1% disagree and 1.6% strongly disagree.

Gender and area differences

The findings show that 37.7% of sampled men strongly agree, 46.2% agree and 12.1% neither agree nor disagree, but only 2.8% disagree and 1.2% strongly disagree. The figures are very similar for women: 38.7% strongly agree, 49.7% agree and 8.2% neither agree nor disagree, but only 1.5% disagree and 1.8% strongly disagree. For area differences: 38.6% of the urban sample strongly agree, 47.1% agree and 10.8% neither agree nor disagree, but only 1.8% disagree and 1.8% strongly

disagree. Moreover, 39.1% of urban women strongly agree, 48.1% agree and 9.4% neither agree nor disagree, but 1.5% disagree and 1.9% strongly disagree. Similarly, 37.8% of urban men strongly agree, 45.6% agree and 12.8% neither agree nor disagree, but only 2.2% disagree and 1.7% strongly disagree.

37.2% of the rural sample strongly agree that the Internet develops society, 51.9% agree and 7.0% neither agree nor disagree, but only 3.1% disagree and 0.8% strongly disagree. In comparison, 37.1% of rural women strongly agree, 56.5% agree and 3.2% neither agree nor disagree, but only 1.6% disagree and 1.6% strongly disagree, whereas 37.3% of rural men strongly agree, 47.7% agree and 10.4% neither agree nor disagree, but only 0.0% strongly disagree and 4.5% disagree.

Table 6-41: Gender and area Chi: the Internet is a means of developing society.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
The Internet is a means of developing society	4.084	3.050	4	4	.395	.549

The gender value of the coefficient of the Chi-square was 4.84 and the Sig was .395, and for area the value of the coefficient of the Chi-square was 3.050 and the Sig was .549. These show that the gender and area variables did not affect the results.

6.3.17 The Internet is a better means of interactivity than old media

For the opinion that the Internet is more interactive than old media, 33.6% of the sample strongly agree, 40.9% agree and 13.2% neither agree nor disagree, but only 9.0% disagree and 3.3% strongly disagree.

Gender and area differences

The findings show that 34.7% of the sampled women strongly agree, 38.3% agree and 14.0% neither agree nor disagree, but only 10.6% disagree and 2.4% strongly disagree. Similarly, 32.1% of the sampled men strongly agree, 44.3% agree and 12.2% neither agree nor disagree, but only 6.9% disagree and 4.5% strongly disagree. For area differences: the findings show that 33.6% of the urban samples strongly agree, 40.3% agree and 13.9% neither agree nor disagree, but only 9.4% disagree and 2.9% strongly disagree. 34.7% of urban women strongly agree, 37.3% agree and 15.3% neither agree nor disagree, but only 10.8% disagree and 1.9% strongly disagree. 31.8% of urban men strongly agree, 44.7% agree and 11.7% neither agree nor disagree, but 7.3% disagree and 4.5% strongly disagree.

Of the rural area sample, 33.6% strongly agree, 43.0% agree and 10.9% neither agree nor disagree, but only 7.8% disagree and 4.7% strongly disagree. 34.4% of rural women strongly agree, 42.6% agree and 8.2% neither agree nor disagree, but only 9.8% disagree and 4.9% strongly disagree. Of the rural men, 32.8% strongly agree, 43.3% agree and 13.4% neither agree nor disagree, but only 6.0% disagree and 4.5% strongly disagree.

Table 6-42: Gender and area Chi: the Internet is a better means of interactivity than old media.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
The Internet is a better means of interactivity than old media	5.790	2.170	4	4	.215	.704

The gender value of the coefficient of the Chi-square was 5.790 and the Sig was .215, and the area value of the coefficient of the Chi-square as 2.170 and the Sig was .704. Thus neither variable affected the results.

6.3.18 The Internet increases freedom of speech

For the opinion that the Internet might improve users' freedom of speech, the findings show that 54.0% of the samples strongly agree, 42.0% agree and 3.0% neither agree nor disagree, but only 0.7% disagree and 0.3% strongly disagree.

Gender and area differences

The findings show that 53.8% of the sampled women strongly agree, 42.9% agree and 2.7% neither agree nor disagree, but only 0.7% disagree and 0.0% strongly disagree. 54.3% of the sampled men strongly agree, 40.8% agree and 3.3% neither agree nor disagree, but only 0.8% disagree and 0.8% strongly disagree. For area differences: the findings show that 53.1% of the urban samples strongly agree, 43.1% agree and 2.5% neither agree nor disagree, but only 0.9% disagree and 0.4% strongly disagree. 53.0% of urban women strongly agree, 43.7% agree and 2.6% neither agree nor disagree, but only 0.7% disagree and 0.0% strongly disagree. In comparison, 53.4% of urban men strongly agree, 42.1% agree and 2.2% neither agree nor disagree, but only 1.1% disagree and 1.1% strongly disagree.

57.0% of the rural sample strongly agree and 38.3% agree, while 4.7% neither agree nor disagree. 57.4% of rural women strongly agree and 39.3% agree, while 3.3% neither agree nor disagree. Also, 56.7% of rural men strongly agree and 37.3% agree, while 6.0% neither agree nor disagree.

Table 6-43: Gender and area Chi: the Internet increases freedom of speech.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
The Internet increases freedom of speech	3.088	5.441	4	4	.543	.245

The gender value of the coefficient of the Chi-square was 3.088 and the Sig was .543, and the area value of the coefficient of the Chi-square was 5.441 and the Sig as .245. Therefore, neither variable affected the results. Men and women in the rural area both agree and strongly agree that the Internet is a means of freedom of speech and by none of them 'strongly disagreeing' or 'disagreeing' it appears gender and area variables affected results. This might be because the Internet offers an important opportunity for freedom of speech.

The results answer survey question: 17, the analysis shows that:

- The majority of the participants believe that the Internet is an open and easy means of communication, a source of entertainment, modern and a study aid, and they believe that it makes users more effective, improves society, is more interactive than old media and it allows for more freedom of speech.
- The majority of the participants also believed that the Internet does not have a negative role in society and does not harm local culture.
- No statistically significant differences were observed between the genders or areas of residence. The fact that there is no difference between men and women is important.

6.3.19 Participants' feelings about the Internet

A new form of social relations might come about through the influence of the Internet on people's lives, because it presents a huge opportunity to break down borders and establish equality between users around the world. According to Abo-dheer (2013, p. 298), globalisation and awareness are the main factors that drive and impact on ICT. Globalisation in terms of media and communication is driving the acceptance of ICT in Libyan universities where it is being used and adopted more and more, leading to the improvement of people and institutions in Libya (Abo-dheer, 2013, p.296). Moreover, Abo-dheer (2013) emphasised that the Internet in Libya is developing as a means of communication with the world that can meet educational, cultural and political needs. Also, Quiring (2009, p.915), pointed out that Internet users express the opinion that 'they feel like they are part of community', while Ziany (2010) noted that the Internet is an adequate substitute for users' offline social lives because of existing restrictions on personal, social freedom and political opinion. Users' opinions might express their underlying motivations for online behaviour which could include factors of social change because these are fundamental themes of resources, power/politics, and cultural factors which might reappear in a sense, in theories of organisational change' (Leat, 2005, p.4).

Social change can be thought of as having economic, political and cultural elements (Giddens and Duneier, 2000). Moreover, the digital revolution holds many promises for developing countries (Uimonen, 1997). Social change that results from ICTs can occur anywhere with an Internet connection, and as a consequence 'These information technologies might change gaps between rich and poor, men and women, inner and rural areas, this is likely' (Galtung, 1995, p.61).

Essentially, the role of the Internet can be gauged by measuring users' feelings about the Internet with regard to social, cultural and political issues. Internet use satisfies and gratifies needs through daily online interactivities and this might be further measured by analysing young people's opinions of these new communications technologies. Questions were designed to investigate users' relationship with the Internet by classifying eleven proposed points and asking them to respond using a five-point Likert scale as follows: "strongly disagree" (0), "disagree" (1), "neither agree nor disagree" (2),

"agree" (3) and "strongly agree" (4). Their responses are presented as descriptive percentages, followed by an explanation of the issues relating to the study research questions (See the tables in appendix A, section D).

6.3.20 Social feelings

Social feelings might be important to Internet users, and they might use the Internet to satisfy and interact with online friends. Therefore the development of a new society might be observed by measuring social feelings (see the tables in appendix A, section D, pp, 323 -336).

6.3.21 Feeling far from my family

When users are active online, they might feel that they are far from their family. 7.3% of the sample strongly agree with this feeling, 19.4% agree, 15.5% neither agree nor disagree but 36.8% disagree and 20.9% strongly disagree.

Gender and area differences

7.4% of the sampled women strongly agree and 17.9% agree, 16.0% neither agree nor disagree but 37.0% disagree and 21.6% strongly disagree. 7.2% of the sampled men strongly agree and 21.3% agree, 14.9% neither agree nor disagree but 36.5% disagree and 20.1% strongly disagree. For area differences: the findings show that 6.7% of the urban sample strongly agree and 20.0% agree, 15.2% neither agree nor disagree but 37.9% disagree and 20.2% strongly disagree. 7.2% of urban women strongly agree and 17.0% agree, 15.9% neither agree nor disagree but 39.0% disagree and 20.8% strongly disagree. 6.0% of urban men strongly agree and 24.2% agree, 14.3% neither agree nor disagree, but 36.3% disagree and 19.2% strongly disagree.

The result show that 9.4% of the rural sample strongly agree and 17.3% agree, 16.5% neither agree nor disagree but 33.1% disagree and 23.6% strongly disagree. Moreover, 8.3% of rural women strongly agree and 21.7% agree, 16.7% neither agree nor disagree but 28.3% disagree and 25.0% strongly disagree. In comparison, 10.4% of rural men strongly agree and 13.4% agree, 16.4% neither agree nor disagree but 37.3% disagree and 22. 3% strongly disagree.

Table 6-44: Gender and area Chi: feeling far from my family.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Feeling far from my family	1.132	1.925	4	4	.889	.570

The gender value of the coefficient of the Chi-square is 1.132 and the Sig is .889, while the area value of the coefficient of the Chi-square is 1.925 and the Sig is .570. These show that neither variable affected the results.

These results are consistent with the interviews with media experts, one of whom noted that 'young people expand their friendship relationship on the Internet and spend a long time chatting with those friends especially by smartphone. This make them more interested in being online than real time,

therefore, the Internet has played a role in making them far from their real society and more related with the online one'.

6.3.22 Feeling that I expand my relationships

Online interactivity might expand users' community of friends. 28.5% of the sample strongly agree with this and 55.2% agree, 9.8% neither agree nor disagree but 4.4% disagree and 2.1% strongly disagree.

Gender and area differences

31.3% of the sampled women strongly agree and 56.0% agree, 9.0% neither agree nor disagree but 2.2% disagree and 1.5% strongly disagree. Furthermore, 24.9% of the sampled men strongly agree and 54.2% agree, 10.8% neither agree nor disagree but only 7.2% disagree and 2.8% strongly disagree. For area differences: 27.4% of the urban sample strongly agree and 55.8% agree, 10.8% neither agree nor disagree but 4.0% disagree and 2.0% strongly disagree. Moreover, 31.1% of urban women strongly agree and 54.9% agree, 9.5% neither agree nor disagree but 2.7% disagree and 1.9% strongly disagree. 22.0% of urban men strongly agree and 57.1% agree, 12.6% neither agree nor disagree but 6.0% disagree and 2.2% strongly disagree.

32.5% of the rural sample strongly agree and 53.2% agree, 6.3% neither agree nor disagree but only 5.6% disagree and 2.4% strongly disagree. Furthermore, 32.2% of rural women strongly agree and 61.0% agree; 6.8% neither agree nor disagree. 32.8% of rural men strongly agree and 46.3% agree, 6.0% neither agree nor disagree but 10.4% disagree and 4.5% strongly disagree.

Table 6-45: Gender and area Chi: feeling that I expand my relationship.

	Value		**Df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Feeling I expand my relationship	11.898	2.884	4	4	.018	.577

The gender value of the coefficient of the Chi-square was 11.898 and the Sig was .018, and the area value of the coefficient of the Chi-square was 2.884 and the Sig was .577. This result indicates that there is a statistically significant difference in the proportions of men and women in relation to the responses to this question for the sample. With men being more likely to strongly agree.

6.3.23 Feeling of being closer to my friends

The Internet as a network society might allow users to be closer to their friends. 29.5% of the sample strongly agree and 53.3% agree, 11.1% neither agree nor disagree but only 4.6% disagree and 1.6% strongly disagree.

Gender and area differences

28.8% of the sampled women strongly agree that they feel closer to their friends and 52.9% agree, 13.3% neither agree nor disagree but 13.7% disagree and 2% strongly disagree. 30.5% of the sampled

men strongly agree and 53.7% agree, 8.1% neither agree nor disagree but only 2.0% strongly disagree and 5.7% disagree. For area differences: the findings show that 28.0% of the urban sample strongly agree and 54.6% agree, 12.2% neither agree nor disagree but only 4.1% disagree and 1.1% strongly disagree. Moreover, 27.8% of urban women strongly agree and 52.9% agree, 14.4% neither agree nor disagree but only 3.8% disagree and 1.1% strongly disagree. 28.3% of urban men strongly agree and 57.2% agree, 8.9% neither agree nor disagree but 4.4% disagree and 1.1% strongly disagree.

34.9% of the rural sample strongly agree and 48.4% agree, 7.1% neither agree nor disagree but only 6.3% disagree and 3.2% strongly disagree. 33.3% of rural women strongly agree and 53.3% agree, 8.3% neither agree nor disagree but only 3.3% disagree and 1.7% strongly disagree. In comparison, 36.4% of rural men strongly agree, 43.9% agree and 6.1% neither agree nor disagree, but only 9.1% disagree and 4.5% strongly disagree.

Table 6-46: Gender and area Chi: feeling being closer to my friends.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Feeling being closer to my friends	5.287	7.278	4	4	.259	.122

The gender value of the coefficient of the Chi-square was 5.287 and the Sig was .259, while the area value of the coefficient of the Chi-square was 7.278 and the Sig was .122. These show that neither variable influenced the results.

6.3.24 Cultural feelings

Cultural feelings might be important in measuring the influence of the Internet on society. They might arise from cultural needs and gratifications. The measurement of users' a cultural feeling shows the cultural influence of the Internet on users' lives (see appendix A, section D).

6.3.25 Feeling scared about the Internet's negative effect on society

Many studies have been conducted on how the Internet affects societies, and some of these studies have discussed the negative effects of the Internet on society. It might harm societies and divide young people. The findings show that only 8.4% of the sample strongly agree and 16.3% agree, but 32.3% neither agree nor disagree 28.1% disagree and 14.9% strongly disagree.

Gender and area differences

Only 9.9% of the sampled women strongly agree and 17.6% agree, but 14.6% strongly disagree and 24.5% disagree; 33.4% neither agree nor disagree. Only 6.5% of the sampled men strongly agree and 14.6% agree, but 30.8% neither agree nor disagree, 32.8% disagree and 15.4% strongly disagree. For area differences: the findings show that only 8.6% of the urban sample strongly agree and 15.5% agree, but 34.5% neither agree nor disagree, 26.8% disagree and 14.6% strongly disagree. Moreover, only 10.6% of urban women strongly agree and 16.7% agree, but 35.7% neither agree nor disagree,

22.4% disagree and 14.4% strongly disagree. Only 5.5% of urban men strongly agree and 13.8% agree, but 32.6% neither agree nor disagree, 33.1% disagree and 14.9% strongly disagree.

In comparison, only 7.9% of the rural sample strongly agree and 19.0% agree, but 24.6% neither agree nor disagree, 32.5% disagree and 15.9% strongly disagree. Furthermore, 6.7% of rural women strongly agree and 21.7% agree, but 23.3% neither agree nor disagree, 33.3% disagree and 15.0% strongly disagree. Only 9.1% of rural men strongly agree and 16.7% agree, but 25.8% neither agree nor disagree, 31.8% disagree and 16.7% strongly disagree.

Table 6-47: Gender and area Chi: feeling scared about the Internet negative effect on society.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Feeling scared about the Internet negative effect on society	6.602	4.360	4	4	.158	.360

The gender value of the coefficient of the Chi-square was 6.602 and the Sig was .158, and the area value of the coefficient of the Chi-square was 4.360 and the Sig was .360. This test confirmed that neither variable influenced the results.

6.3.26 Feeling like a member of modern society

When users are online and have the opportunity to communicate openly with the world, and especially with developed countries and societies, they might feel that they are using the same means of communication as other users around the world, that they can express their opinions and that they are opening the door of their countries closed regime and society. The findings show that 19.5% of samples strongly agree with this, 49.6% agree and 19.8% neither agree nor disagree but only 2.5% strongly disagree and 8.6% disagree.

Gender and area differences

21.7% of the sampled women strongly agree and 47.1% agree, but only 1.5% strongly disagree and 8.0% disagree; 21.7% neither agree nor disagree. 16.6% of the sampled men strongly agree, 53.0% agree and 17.4% neither agree nor disagree but 9.3% disagree and 3.6% strongly disagree. For area difference: the findings show that 19.1% of the urban sample strongly agree that the Internet makes them like a member of modernised society, 48.9% agree and 20.9% neither agree nor disagree but only 9.2% disagree and 1.8% strongly disagree. Moreover, 21.7% of urban women strongly agree, 44.9% agree and 23.2% neither agree nor disagree but only 9.1% disagree and 1.1% strongly disagree. 15.5% of urban men strongly agree, 54.7% agree and 17.7% neither agree nor disagree but 9.4% disagree and only 2.8% strongly disagree.

In comparison, 20.6% of the rural sample strongly agree, 52.4% agree and 15.9% neither agree nor disagree but only 6.3% disagree and 4.8% strongly disagree. 21.7% of the rural women strongly agree, 56.7% agree and 15.0% neither agree nor disagree but only 3.3% disagree and 3.3% strongly

disagree. Furthermore, 19.7% of rural men strongly agree, 48.5% agree and 16.7% neither agree nor disagree but only 9.1% disagree and 6.1% strongly disagree.

Table 6-48: Gender and area Chi: feeling like a member of modern society.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Feeling like a member of modern society	6.902	5.730	4	4	.141	.220

The gender value of the coefficient of the Chi-square was 6.902 and the Sig as .141, and the area value of the coefficient of the Chi-square was 5.730 and the Sig was .220. These confirm that neither variable affected the results.

6.3.27 Feeling that I develop and expand many ideas

Through online interactions with the Internet, users might be inspired or be able to access new ideas. The findings show that 31.7% of the sample strongly agree, 59.3% agree and 6.0% neither agree nor disagree but only 1.6% disagree and 1.4% strongly disagree.

Gender and area differences

The findings show that 31.9% of the sampled women strongly agree, 58.8% agree and 6.9% neither agree nor disagree but only 1.6% disagree and 0.9% strongly disagree. 31.5% of the sampled men strongly agree, 60.1% agree and 4.8% neither agree nor disagree but only 1.6% disagree and 2.0% strongly disagree. For area differences: the findings show that 31.4% of the urban sample strongly agree, 59.3% agree and 6.6% neither agree nor disagree but only 1.8% disagree and 0.9% strongly disagree. Moreover, 31.8% of the urban women strongly agree, 57.9% agree and 7.7% neither agree nor disagree but 1.9% disagree and 0.8% strongly disagree. 30.9% of urban men strongly agree, 61.3% agree and 5.0% neither agree nor disagree but 1.7% disagree and 1.1% strongly disagree.

In comparison, 32.5% of the rural sample strongly agree, 59.5% agree and 4.0% neither agree nor disagree but only 0.8% disagree and 3.2% strongly disagree. Furthermore, 32.2% of rural women strongly agree 62.7% agree, and 3.4% neither agree nor disagree but only 0.0% disagree and 1.7% strongly disagree. 32.8% of rural men strongly agree, 56.7% agree and 4.5% neither agree nor disagree but only 1.5% disagree and 4.5% strongly disagree.

Table 6-49: Gender and area Chi: feeling that I develop and expand my ideas.

	Value		Df		Sig. (2-sided	
	Gender	Area	Gender	Area	Gender	Area
Feeling that I develop and expand my ideas	2.174	4.880	4	4	.704	.300

The gender value of the coefficient of the Chi-square was 2.174 and the Sig was .704, and the area value of the coefficient of the Chi-square was 4.880 and the Sig was .300. These show that neither variable affected the results.

6.3.28 Political feelings

Political feelings might be an element of the role of the Internet in society and might arise from political needs and gratifications. The findings show the extent of users' political feelings about their online interactions and thus the extent of the political influence of the Internet on their lives (see appendix A, section D).

6.3.29 Feeling free to express my opinion comfortably

It might not be easy to express opinions, especially those concerning political issues, in Arab countries due to censorship and the monitoring of political life. Internet users might express their opinions about various life issues more comfortably online. The findings show that 27.3% of samples strongly agree with this idea, 56.7% agree, 8.9% neither agree nor disagree 4.2% disagree and 2.8% strongly disagree.

Gender and area differences

28.2% of the sampled women strongly agree, 58.2% agree and 8.9% neither agree nor disagree but only 2.2% disagree and 2.5% strongly disagree. 26.2% of the sampled men strongly agree, 54.8% agree and 8.9% neither agree nor disagree but only 6.9% disagree and 3.2% strongly disagree.

For area differences: 26.1% of the urban sample strongly agree, 57.2% agree and 9.7% neither agree nor disagree but only 4.5% disagree and 2.5% strongly disagree. Moreover, 27.8% of urban women strongly agree that they feel that they can express their opinions more comfortably online, 56.7% agree and 10.3% neither agree nor disagree but 2.7% disagree and 2.7% strongly disagree. 23.8% of urban men strongly agree, 58.0% agree and 8.8% neither agree nor disagree but only 7.2% disagree and 2.2% strongly disagree.

In comparison, 31.5% of the rural samples strongly agree, 55.1% agree and 6.3% neither agree nor disagree but 3.1% disagree and 3.9% strongly disagree. 30.0% of rural women strongly agree, 65.0% agree and 3.3% neither agree nor disagree but 0.0% disagree and 1.7% strongly disagree. 32.8% of rural men strongly agree, 46.3% agree and 9.0% neither agree nor disagree but 6.0% disagree and 6.0% strongly disagree.

Table 6-50: Gender and area Chi: felt free to express my opinion comfortably.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Felt free to express my opinion comfortably	8.095	2.974	4	4	.088	.562

The gender value of the coefficient of the Chi-square was 8.095 and the Sig was .088, and the area value of the coefficient of the Chi-square was 2.974 and the Sig was .562. This test confirms that neither variable affected the results.

6.3.30 Feeling that I improved my political ideas

Political ideas can be developed and improved by the information obtained when browsing the Internet. This is a means of knowledge which can be improved by online interactions with other users as friends and with content ideas such as news articles, reports and photos. The findings show that 35.4% of the sample strongly agree, 53.4% agree and 8.6% neither agree nor disagree but only 1.6% disagree and 1.0% strongly disagree.

Gender and area differences

34.3% of the sampled women strongly agree, 54.9% agree and 9.3% neither agree nor disagree but only 1.2% disagree and 0.3% strongly disagree. 36.9% of the sampled men strongly agree, 51.4% agree and 7.6% neither agree nor disagree but 2.0% disagree and 2.0% strongly disagree.

For area differences: 35.7% of the urban sample strongly agree, 53.6% agree and 9.0% neither agree nor disagree but 1.1% disagree and 0.7% strongly disagree. Moreover, 33.7% of urban women strongly agree, 54.5% agree and 10.2% neither agree nor disagree but only 1.1% disagree and 0.4% strongly disagree. 38.5% of urban men strongly agree, 52.2% agree and 7.1% neither agree nor disagree but only 1.1% disagree and 1.1% strongly disagree.

In comparison, 34.6% of the rural sample strongly agree, 52.8% agree and 7.1% neither agree nor disagree but 3.1% disagree and 2.4% strongly disagree. Furthermore, 36.7% of rural women strongly agree, 56.7% agree and 5.0% neither agree nor disagree but 1.7% disagree and 0.0% strongly disagree. 32.8% of rural men strongly agree and 49.3% agree, 9.0% neither agree nor disagree but 4.5% disagree and 4.5% strongly disagree.

Table 6-51: Gender and area Chi: feeling that I improved my political ideas.

	Value		**df**		**Sig. (2-sided**	
	Gender	Area	Gender	Area	Gender	Area
Feeling that I improved my political ideas	5.472	5.496	4	4	.242	.240

The gender value of the coefficient of the Chi-square as 5.472 and the Sig was .242, and the area value of the coefficient of the Chi-square was 5.496 and the Sig was .240. Thus neither variable affected the results.

6.3.31 Feeling comfortable and free

Users who spend most of their time on the Internet might feel comfortable and free online. 17.7% of the sample strongly agree with this statement, 51.3% agree and 18.4% neither agree nor disagree but only 9.1% disagree and 3.5% strongly disagree.

Gender and area differences

17.6% of the sampled women strongly agree, 50.6% agree and 20.4% neither agree nor disagree but only 8.3% disagree and 3.1% strongly disagree. 17.8% of the sampled men strongly agree 52.2% agree and 15.8% neither agree nor disagree but 10.1% disagree and 4.0% strongly disagree. For area

differences: the findings show that 16.0% of the urban sample strongly agree, 52.4% agree and 19.8% neither agree nor disagree but 9.4% disagree and 2.5% strongly disagree. Moreover, 16.3% of urban women strongly agree, 51.1% agree, and 21.2% neither agree nor disagree but only 8.7% disagree and 2.7% strongly disagree. 15.5% of urban men strongly agree, 54.1% agree and 17.7% neither agree nor disagree but 10.5% disagree and 2.2% strongly disagree.

In comparison, the results show that 23.8% of the rural sample strongly agree, 47.7% agree and 13.5% neither agree nor disagree but only 7.9% disagree and 7.1% strongly disagree. 23.3% of rural women strongly agree, 48.3% agree and 16.7% neither agree nor disagree but 5.0% strongly disagree and 6.7% disagree. 24.2% of rural men strongly agree, 47.0% agree and 10.6% neither agree nor disagree but only 9.1% disagree and 9.1% strongly disagree.

Table 6-52: Gender and area Chi: feeling comfortable and free.

	Value		**df**		**Sig. (2-sided)**	
	Gender	Area	Gender	Area	Gender	Area
Feeling comfortable and free	2.537	11.733	4	4	.638	.019

The gender value of the coefficient of the Chi-square was 92.537 and the Sig was .638. The area value of the coefficient of the Chi-square was 11.733 and the Sig was .019. These show that area likely affected the results, but gender did not.

6.3.32 Feeling more effective

In Arab society, users of the Internet might feel that the Internet gives them the opportunity to experience freedom. 33.3% of the sample strongly agree with this, 54.2% agree and 8.1% neither agree nor disagree but only 3.5% disagree and 1.8% strongly disagree.

Gender and area differences

32.2% of the sampled women strongly agree, 54.2% agree and 9.3% neither agree nor disagree but only 0.9% strongly disagree and 3.4% disagree. 33.8% of the sampled men strongly agree, 52.2% agree and 6.5% neither agree nor disagree but only 3.6% disagree and 2.8% strongly disagree. For area differences: the findings show that 30.9% of the urban sample strongly agreed, 54.5% agree and 9.5% neither agree nor disagree but only 3.6% disagree and 1.6% strongly disagree. Moreover, 30.8% of urban women strongly agree, 54.0% agree and 10.6% neither agree nor disagree but only 0.8% strongly disagree and 3.8% disagree. 30.9% of urban men strongly agree, 55.2% agree and 7.7% neither agree nor disagree but only 3.3% disagree and 2.8% strongly disagree.

In comparison, 42.1% of the rural samples strongly agree 49.2% agree and 3.2% neither agree nor disagree but 3.2% disagree and 2.4% strongly disagree. 38.1% of rural women strongly agree 55.0% agree and 3.3% neither agree nor disagree but only 1.7% disagree and 1.7% strongly disagree. Furthermore, 45.5% of rural men strongly agree, 43.9% agree and 3.0% neither agree nor disagree but only 4.5% disagree and 3.0% strongly disagree.

Table 6-53: Gender and area Chi: feeling more effective.

	Value		df		Sig. (2-sided)	
	Gender	Area	Gender	Area	Gender	Area
Feeling more effective	4.676	7.929	4	4	.322	.094

The gender value of the coefficient of the Chi-square was 4.676 and the Sig was .322, and the area value of the coefficient of the Chi-square was 7.929 and the Sig was .094. This test shows that neither variable affected the results.

The results answer survey question: 18 (see appendix A, section D, pp, 323 -336). The analysis shows that:

- The majority of the sample responded that the Internet is a social, cultural and political means of communication about which they have positive feelings.
- The Internet has social, cultural and political aspects which are noted through the investigation of the participants' feelings.
- Both genders expressed similar feelings about the Internet.
- Respondents in both urban and rural areas express similar feelings about the use of the Internet and very few statistically significant differences were noticed between them.

6.3.33 Summary online behaviour

Section 6.3 dealt with the findings in three parts: participants' interaction with Internet content, how they found the Internet and their feelings about the Internet. It presented analysis of how Libyan university students interact with Internet content based on seven interactive behaviours, which respondents described on a Likert scale in order to measure their awareness and online behaviour. The first section (6.5) addressed the RQ 9: 'how do Libyan university students interact with Internet content and to what extent are they being creative when they do so? 'The findings indicated that participants interact with Internet content by writing posts, watching videos, posting, sending content to friends and following content on social media.

There is no statistically significant difference between the genders in their interactions with Internet content, although women are slightly more inclined to focus more on social media interaction. Additionally, the respondents in both urban and rural areas interact similarly with online content.

The section addressed the RQ 10: 'how content and happy are users with the Internet and what do they think about its role in their lives through analyzing their opinion?' The findings discovered what satisfactions respondents find in their Internet interactions. The opinion of the majority of participants noted overwhelmingly that the Internet is an open and easy means of communication, entertainment, modern, helpful for study, whilst it makes users more effective, improves society, is better than old media and is important in users' lives.

The majority of participants' opinions about the Internet claimed that it does not have a negative role in society and does not harm society or culture. No statistically significant differences were observed between genders or areas of residence and all groups expressed general opinions about the Internet within quite the same range in considering the Internet is a social, cultural and political means. The fact therefore that there is no difference between men and women is important.

The last stage focused on respondents' feelings about the Internet in order to address the question of influence. It was found that the majority of respondents feel that the Internet is important for their social, cultural and political lives. Participants feel that the Internet expands their relationships, makes them closer to their friends and does not distance them from their families. Most respondents feel that the Internet does not harm local culture, that it makes them members of a modern society and that it helps them to encounter and develop new ideas. For the respondents' political feelings, most feel that they can express their opinions freely through online activity and improve their political ideas, that they are free and comfortable online, and the Internet gives them the opportunity to experience freedom. No statistically significant differences were noted between the genders or areas.

6.4 Chapter summary

Both students in Tripoli University as an example of an urban area and Azzawya University as an example of a rural area were surveyed to investigate the anticipated social, cultural and political impacts of Internet use and online daily activity on the potential development of a "new type of society" (Van Dijk, 1999a, p.23). The data analysis focused on participants' online interactions with Internet content, and then assessed their opinions and feelings about their online interactions. Overall, the results address the research objective to explore the argument that the Internet has an influence on society through users' online interactions and to assess users' online interactions with Internet content and opinion and feeling about it in order to discover the extent to which they are happy with it and the extent to which it influences their lives. This chapter presented data analysis in order to achieve two objectives in two sections, so this conclusion is divided into two sections to summarise the findings for both study objectives separately.

6.4.1 The anticipated social, cultural and political impact of Internet use

This section addresses the third study objective: 'the Internet has an important role in society, so this study explores whether user's online interactivity anticipated social, cultural and political impacts on society through its influence on young people's lives. It also explores users' awareness and the elements that persuade them to browse Internet sites'. This was achieved by answering three study questions.

Research question 6 asked 'which online interactions do Libyan university students engage in and to what extent are they interested in social, cultural and political content?' The sample was asked to say how often they engaged in twelve social, cultural and political online activities. First, the findings

showed that the majority of the respondents were interested in social online interactivities such as chatting with online friends, escaping from the pressures of society and having new relationships. Men and women and respondents living in both rural and urban areas gave similar responses and all were interested in social online interactivity. Second, the findings showed that respondents were interested in cultural factors such as leisure, entertainment, music, video and games, as well as searching for ideas about other cultures and finding answers to questions. These activities were of high interest to the respondents. Men and women and urban and rural respondents reported similar levels of online cultural interactivity. Third, the findings showed that political online interactivity was important to the participants, who were particularly interested in freedom of speech and expressing their opinions, using the Internet to discuss and share various issues with friends and following local and international news. Again, no statistical differences were observed between genders or areas. Fourth, the findings showed that personal use of the Internet was ranked quite highly by participants. Women were more interested in using the Internet to study than men, while both genders expressed similar levels of interest in using the Internet for their personal needs. Moreover, the samples from both areas expressed similar levels of interest in online interactivity for educational and personal needs.

Research question 7 asked 'what relationship is there between users' awareness and the elements that persuade them to navigate sites, and to what extent are Libyan university students aware of Internet content?' This question followed the framework proposed by Couldry et al., (2003), who pointed out the five functions driving media power, in order to measure the media power of the Internet. Respondents were asked whether they had favourite sites that they regularly accessed; the process of Internet power as the 'the media use objects or issues to influence what people should think about' (Cohen, B., 1963, p.13).

First, the findings showed that nearly half of the respondents have favourite sites which they regularly browse, while more than a third were not sure whether they did or not and a quarter reported that they did not have a favourite site. Women mentioned having favourite sites which they visit regularly more than did men. Similarly, urban respondents mentioned having favourite sites more than did rural respondents. Second, in order to focus on participants' daily awareness, the sample was asked if they have a daily Internet browsing map. More than two thirds replied positively, only 10% responded negatively while the rest stated that they had a browsing map but did not use it often. There were no statistically significant differences between genders or areas.

Moreover, the Internet's media role can be seen in its agenda-setting process that makes users be interested in sites using titles and content: it tells users what parts of the subject are important, so the media focus on the characteristics of the issues that people should think about (Rogers and Dearing, 1988). Therefore, what persuades users to browse sites was investigated. Two thirds of respondents

stated that both the title and the content of a website persuaded them to browse it, and no statistical differences were noted between genders or areas.

Research question 8 asked ‘which sites do users use and navigate and which are most used to gratify their needs?’, this question sought to address users’ awareness. Respondents’ were asked to say how often they visited sites using a Likert scale. These sites include e-mail, social media such as Facebook and Twitter, Google, Skype and Messenger, YouTube, academic websites, commercial and shopping sites, international and Libyan news sites and sport and music websites. The findings showed that Google and Facebook were most used by respondents, while emails, academic sites, international and Libyan news sites, YouTube and sport and music sites were all frequently used by the respondents. Commercial sites were least frequently used, which might be due to the very low level of such economic transactional uses of the Internet in Libyan society. No statistical differences were observed between the genders, but there was a little significant difference between the areas: respondents from urban areas were more interested in browsing YouTube than those from rural areas, whereas rural respondents were more interested in browsing international and Libyan news than their urban counterparts.

6.4.2 Online daily interactivity and the potential development of a new society

This section addressed the fourth study aim and the sixth and seventh study objectives. I hoped to achieve the fourth study objective: ‘to explore the argument that the Internet has influence on society through users’ online interactions and to assess users’ online interactions with Internet content. Also to assess users’ opinions and feelings about the Internet to know to what extent they are happy with it and to what extent it has influenced their lives’. This objective was achieved by answering the following study questions.

Research question 9 asked ‘how do Libyan university students interact with Internet content and to what extent are they creative when they do so?’ Therefore, investigating how respondents interact with Internet content might help to measure their level of awareness and the extent of the influence of Internet content in light of agenda-setting theory. The samples were asked to describe how often they engaged in seven types of interactive behaviour. The results showed that Libyan university students regularly follow content on social media, read articles, send articles to their friends, re-publish opinions on their own social media pages and watch videos, and sometimes save or print out content on their computers. No statistically significant differences were observed between the respondents from rural and urban areas or between the genders. Users interact by engaging in important online interactivities such as reading writing, watching and publishing.

Research question 10 asked ‘how content and happy are users with the Internet and what do they feel about the role of the Internet in their lives? The sample was asked to describe how they found the Internet, and how it influenced them personally and its wider impact on the society. The responses

used a five-point Likert scale. This dynamic between media users and the media itself was noted by Littlejohn (2002, p.320), who claimed that 'the media agenda affects the public agenda, and the public agenda affects the policy agenda'. The analysis of the findings showed that respondents found the Internet to be an interesting and important part of their lives. Their responses showed that they felt that the Internet improved their access to information, developed society, opened up free communication with the world, helped them to study, made them more active, was more interactive than old media and was a means of entertainment. On the other hand, respondents did not think that the Internet is harmful to local culture nor a negative influence on society. No statistically significant differences were noticed between genders, but a slight difference was apparent between the areas: the urban sample described the Internet as a means of entertainment more than did their rural counterparts, while the rural sample considered the Internet as a means of studying more than did the urban sample. These few differences were not great but were by about ten points in both cases.

The sample were then asked to rank ten social, cultural and political feelings on a Likert scale in order to analyse the ways in which the Internet might influence its users' behaviour and opinions. First, with regard to social feelings, the analysis showed that about two thirds of the respondents felt that the Internet does not distance them from their families, but they did feel that it expands their relationships and makes them closer to their friends. The only noticeable difference between the genders was that women felt that the Internet expands their relationships more than did men, a factor which might be due to social differences in Arab and Libyan society. No statistically significant differences were noted between respondents based on area of residence.

Second, with regard to cultural feelings, the findings showed that participants were very interested in culture. The sample felt that the Internet does not harm society, but rather that it makes them active members of a modern society and helps them to develop and discover ideas. There were no statistically significant differences between genders or areas.

Third, with regard to political feeling, the data analysis showed that the respondents felt that the Internet provides a positive political impact. They felt that it allows them to express their opinions comfortably, improves their political ideas, makes them feel comfortable and free, and provides a means of freedom. Both genders expressed similar feelings regarding the political impact of the Internet, although the women felt that the Internet improves their political ideas more than did men. Both urban and rural areas felt the same about the Internet in general, although the rural sample was more inclined to see the Internet as a means of freedom. The next chapter discusses the main findings of the study in the context of the wider literature and addresses the main research aims, objectives and questions.

Chapter 7: Discussion and conclusion

7.1 Introduction

This study has contributed to an understanding of the role of the Internet in Libyan university students' lives by surveying Tripoli university students and Azzawya university students. This discussion starts by summarising the research process and based on the data analysis in chapter 6. It is carried out by five steps; in the first section (7.2), a focus was placed in particular on computer ownership and Libyan university students' individual use of the Internet and experiences of those users including; length of time spent, difficulties, kind of obstacles, similarity and differences between genders and areas. In the second section (7.3), the discussion focuses on the ability of gratifying online needs, motivation of Internet use and social, cultural and political gratifications achieved. The third section, (7.4), examined online social, cultural and political interactions, users' awareness, the elements that persuade them to navigate sites. In the fourth section (7.5), the discussion examined online behaviour, the respondents' opinions and feelings about their use of the Internet. The fifth section, (7.6), explores the media role of the Internet, which may result in social change and the development of a 'new society'. These sections are followed by the conclusion, which outlines any limitations and makes recommendations for further study. The next section summaries the research process.

The research also set out to understand the phenomenon of Internet use in Libyan society including differences related to gender and area of residence and using the concepts of the information age, network society, use and gratification, interactivity, agenda-setting, social change and the second 'new society'.

Although the samples surveyed in this study did not cover all young people in Libya, they did represent university students as a substantive sub-group within the country's demographic make-up. These university students are highly educated individuals who are representative of young Libyan people aged between 18 and 25 (Libyan Education Age, 2013). They are also representative of the main users of new communications technologies, especially the Internet (Abo-Harara, 2010, Mahroum, 2011). It is important to note that this study was proposed in 2010, carried out from the start of 2011, when the Libyan revolution and civil war occurred.

7.1.1 Summary of the research process

This research as a whole has investigated the role of the Internet in university students' lives in Libya following the aims, objectives and study questions set out in chapter 1 section 1.6. The study has identified the level of Internet use by university students, categorized their experience, purposes, motivations, and needs and anticipated potential social, cultural and political impacts of Internet use.

It has also measured online interactive behaviour and respondents' opinions and feelings about the Internet. These would sum up the background of the emergence of a new society. The thesis in chapter one developed a research framework for investigating its subject, research area, research society, study aim, objectives, and questions. Also, it presented research philosophy. Chapter two presented the country's structure and brief Libya background and its media development. The literature review including framework theories that formed the basis of this study were outlined in chapter three. The study design and methodology were presented in chapter four, which outlined the main methods and complementary instrumental methods used in the study and the design and execution of its questions. Chapters five and six presented and analysed the results.

Chapter seven discusses and interprets the results in light of the aims, objectives, and answers to study questions. Data have already been analysed in the four sections of both results chapters.

Therefore, the discussion process would be in five sections:

1. Section 7.2 comprises a summary and discussion of the main and complementary findings of the research and examined the study questions with regard to the research objectives and existing literature. This will be discussed under the framework theory of information age, network society, digital divide, and use and gratifications.
2. Section 7.3 discusses the purposes and gratifications of using the Internet, this will be discussed under the framework theory of use and gratifications and interactivity.
3. Section 7.4 discusses the anticipated social, cultural and political impacts of the Internet on users' lives. This will be discussed under the framework of interactivity, agenda-setting, and social change.
4. Section 7.5 discusses online interactive behaviour and the potential development of a new society (Van Dijk, 1999a, p.23 and Mahroum, 2011). It also discussed the findings relating to online interactive behaviour and the opinions and feelings of users about the Internet. These will be discussed under the framework theories of social change, new and second society.
5. Section 7.6 sums up of the four previous areas; therefore, this discussion describes the role of the Internet in those Libyan university students' lives and the development of a new society through the Internet. This will be discussed under the framework theories of new and second society and new Arab society.

This discussion is guided by the study objectives which were:

- To ascertain the surveyed university students' use of the Internet and describe any differences between urban and rural areas and between the genders. This description examines use experience, including computer ownership, use rate, time spent online and place of connection, and it seeks to examine any difficulties arising from or obstacles to Internet use.

- To ascertain the respondents' purposes and motivations for using the Internet and the social, cultural, and political needs satisfied online, and to describe any differences between urban and rural areas and between the genders.
- To examine whether users' online interactivity anticipates social, cultural and political impacts on society through the Internet's influence on Libyan university students' lives. Also, to explore users' awareness and the elements that persuades them to browse Internet sites and help to achieve their goals.
- To explore the argument that the Internet has influence on society through users' online interactivities, to assess users' online interactions with Internet content and to measure users' opinions and feelings about the Internet in order to know the extent to which they are happy with it and how it influences their lives.
- To combine the results to provide a full picture of university students' use of the Internet and consider its potential role in the development of Libyan society. Also to combine the results to examine the extent to which a new society can be said to have arisen in Libya.

The discussion that addresses these objectives is divided into five stages: first, level of computing and Internet use and experience; second: the purposes and gratifications of Internet use; third: the social, cultural and political roles of the Internet; fourth, the participants as more than users; and fifth: the new type of society developed through online interactivity.

7.2 Network society, levels of computing and Internet use

7.2.1 Measurement of Internet use and experience

One aim of this research is to analyse data regarding Libyan university students' Internet use and experience according to gender and area. This section discusses (1) use and experience; (2) difficulties of and obstacles to going online; and (3) the digital divide between genders and areas before offering a summary. This discussion would be through theories of network society, digital divide and use and gratification. It would answer questions of; which data section, how and in what way this discussion supported, neither extending nor contradicting these theories. Also, this discussion is grounded on discussion of previous studies (see chapter 3). It is the explanation of data in chapter 5 section 5.3. Moreover, the interpretation details of the data are classified regarding objective and study questions RQ1, RQ2 and RQ3.

The discussion is based on the findings of this research and supported by previous studies. Computer ownership is popular in Libyan society, with most of the sample (more than 90%) reporting that they have a computer in their home. These findings are consistent with those of El Gamal (2010) and Aslanidou and Menexes (2008) and show how home Internet connections in Libya are well-developed, so Libya can be considered part of the information age and the global village (Albrow,

1996, Fuller, 1996, Melucci, 1996, Garon, 1999, Webster, 2005, Castells, 2010, 2011, Devriendt et al., 2011). Libyan university students are able to go online, and computers are an important means of connecting to international network society in Libyan society. This view was supported by Bolter (1991, p.238), who claimed that 'the computer is an ideal writing space for our networked society'. Wilson (2006, p.178) emphasised the digital divide in 'access to ICT devices', however, in the result of this study of measurement of owning computers (RQ1) and using the Internet (RQ2&RQ3) it was noted that this divide does appear to be narrowed down and nearly disappeared between the male and female Libyan university students in both urban and rural areas. This discussion extends Martin's, (1970) idea of the computerised society and the wired society (1977), he foresaw that these new forms of communication would have a number of consequences for the organisation of work, social relations, education, political life, Moreover, computers, as a technology, play a role in users' lives and might guide social change, like other technologies, like the wheel, gunpowder or the printing press (Mondal, 2015).

7.2.2 Libyan university students and use of the Internet

Rancer and Womack, (1997) noted that use and gratification has been used in communication theories in an attempt to explain how individuals use mass media to satisfy their needs (Leenheer, 2008). Therefore, Libyan university students (see chapter5, section 5.3) predominantly use the Internet (98%), evidencing a narrowing of the 'usage accesses' identified as a kind of digital divide by Van Dijk and Hacker (2003) as he noted that usage access is one of the digital divide types. Moreover, according to Castells (2002, p.248), the 'digital divide is an "inequality of access to the Internet". Therefore, level of education helps to bridge digital divide in some way "the lack of a college degree will result in more inequality issues' (Chih et al., 2011, p.160), the way that results appeared narrow down gap between gender and areas in using the Internet that level of education is an important factor in this point. These results supported those of earlier studies of the spread of new communications technologies and the widespread adoption of Internet use in Libya (Ibrahem, 2008, Abo-Harara, 2010), Africa (Sonaike, 2004) and several Arab countries (The Gallup Report, 2009, 2010, Hamdi, 2010, The Silatech Index, 2011, Ali, 2014). This widespread use of the Internet is consistent with the arguments of Castells (2007, p.9), who noted the trend for the diffusion of information technologies in developing poor countries or areas 'where there is no electricity but there is some form of courage and mobile charging of mobile batteries in the form of merchant bicycles'.

7.2.3 Length of experience of online interactivity

Findings (see chapter 5, section 5.3) relating to the average length of Internet experience indicate that most Libyan students in Tripoli and AZzawya University have used the Internet for a minimum of three years. Moreover, the majority go online every day, although some access the Internet five times a week, most commonly for about four hours a day. This showed that 'mental accesses, another of the

digital divide barriers (Van Dijk and Hacker, 2003), is being bridged in Libyan universities. Similarly, a survey of Internet use conducted by Gallop 2011 in the Arab countries found that the majority of those aged between 18 and 25 used the Internet every day (The Silatech Index, (2011). These results concur with those of Shen and Shakir (2012), Aibraheem (2008) and Al-Khauja, (2000), and are consistent with the findings discussed in chapters three and four: Al-Khauja (2000), Rabea (2006), Shen and Shakir (2009), The Silatech Index (2011) and Koc (2007).

7.2.4 Means of online connection used

The results (see chapter 5, section 5.3) indicated that home Internet connections are widely used by the respondents, with a majority of them (84.5%) using home connection, which is consistent with the findings of previous studies such as Aslanidou and Menexes (2008). This again shows the widespread use of the Internet in Libyan society and is linked with the rate of computer ownership, which in turn helps to confirm the passage of Libya from a closed society, culture and political regime into a more open and globalised society. A third of the sample also used their mobile phone to connect to the Internet, which is consistent with the findings of Zuehlke (2012) and the Silatech Index (2011), and about a third of the respondents also used a cybercafé as a means of connection, which is consistent with the findings of Zoda (2011, p.1438) and Koc (2007). There are therefore multiple opportunities to connect the Internet in Libyan society, and this use of home, mobile phone and cybercafé connections is consistent with earlier studies of Internet use in Libya (Abo-Harara, 2010, The Silatech Index, 2011) and in the Arab countries (Koc, 2007, Aslanidou and Menexes, 2008, The Silatech Index, 2011, and Zoda, 2011, p.1438). This supported theory of network society explains how society linked with the world cultural information highway, which, as Castells (2007, 29) argued, suggests that societies are passing from the industrial age into the information age (see also Castells, 2000a, 2000b).

7.2.5 Difficulties of and obstacles to going online

More than two thirds of the respondents (see chapter 5, section 5.3.7/8/9) had no difficulties using the Internet, while about a third experienced some difficulties, with no statistically significant differences between genders or areas, although women in rural areas have fewer difficulties (62%) than men in rural areas (58%). Similar findings were reported by the Silatech Index (2011), Shen and Shakir (2012) and Alghalban (2007).

7.2.6 Kind of obstacle faced when using the Internet

Internet connection costs (54.2%) were the obstacle most frequently noted by respondents. Other difficulties (45.6%) were the next most common obstacle, followed by control and monitoring. Nearly a quarter of the respondents (14.9%) mentioned that they had no difficulties in using the Internet. These findings are consistent with earlier studies, such as the Silatech Index (2010), Shen and Shakir

(2012), Alghalban (2007), Sonaike (2004) and Ali (2014). The frequency of cost as an obstacle is suggestive of the digital divide caused by socio-economic status.

Based on these results, we can conclude that the Internet is widely used in Libyan society, and that home connections have developed and improved the online network society of Libya. Moreover, the results reflect the observation that Internet use is supported by Libyan families, who are interested in having Internet connections at home and supporting their children in going online to meet their various needs. These indications were congruent with past research into the rise of the global village through new communications technologies.

What has emerged from these findings is that the society of Libyan university students has made significant progress towards becoming a more and more online networked society. Thus it can be concluded that Libyan university society as a part of Libyan society is moving into the new information age, recalling Castell's (2007, p.29) argument that 'societies are passing from the industrial age into the information age' and new communications technologies are moving societies from a dependence on energy (coal and oil) to a dependence on information, (see also Castells, 2000a, 2000b). Also, the rise of Internet use in Libya is consistent with the idea of the global village (McLuhan, 1964) and the idea of globalisation in everyday life (Albrow, 1996, Fuller, 1996, Melucci, 1996, Garon, 1999, Webster, 2005, Castells, 2010, 2011, Devriendt et al., 2011). Furthermore, Ruggiero (2000), pointed out that the emergence of computer-mediated communication, has revived the significance of use and gratification theory. Finally, the findings indicated that Libyan university students have developed a high level of ability to use the Internet.

7.2.7 Differences between genders and areas of residence

In response to objective 1, which aimed to investigate and measure Internet use and experience and to identify any differences between genders and between respondents living in different areas, the following trends were identified.

First: gender differences and use opportunity

The findings indicated great similarities between men and women in Libyan universities for computer ownership and Internet use, indicating a narrowing of digital divide which is an 'inequality of access to the Internet' (Castells, 2002, p.248). More than 93% of both men and women reported owning a computer, showing that the rate of 'material accesses', which Van Dijk and Hacker (2003) noted as one type of digital divide, has narrowed. Similarly, the findings indicated that there was no difference between genders in using the Internet, with 98% of both men and women of both areas saying that they use the Internet regularly. This showed that 'usage access' (Van Dijk and Hacker, 2003) has also narrowed. These findings are consistent with those of Ibrahem (2008), Alghalban (2007), Abo-Hrara (2010) and the Silatech Index (2011). Regarding the length of Internet experience, the findings indicated that nearly half of both male and female respondents have used the Internet for 4 years or more. More than a third of men and women have used it for 4-6 years, with a divergence of not more

than 3% between the genders. Two thirds of both men (61.4%) and women (65.9%) use the Internet every day. Regarding the means of connection used, the findings indicated that both men and women use home connections in similar amounts, with only a small difference in urban areas, where home connections are 4% more common. There was also a slight difference in the use of a cybercafé connection, which were used more by men than women in this area, whereas women use mobile phone connections more than men. For difficulties in using the Internet, the findings indicated that two thirds of both men and women faced no difficulties, and no differences were noted between the genders, although more women than men quoted the cost of Internet connection as an obstacle. These findings are consistent with those of Mourtada and Salem (2012), Aibraheem (2008), The Silatech Index (2011), Rabea (2006), Ibrahem (2008), Abo-Harara (2010) and Sonaike (2004).

To summarise, the use of the Internet and experience of going online were similar for both men and women. Ragnedda and Muschert (2013, p. i) defined 'the digital divide as the unequal access and utility of internet communications technologies'. Therefore, it could claim that the gap between Libyan university students in material accesses and usage accesses has narrowed.

Therefore the gender variable can be claimed to be of little significance in the general analysis regarding the ability to use the Internet, the time spent online and the experience of using the Internet. This is consistent with the claims made by Ogbum (1947), who argued that technologies develop new conditions of life and the technology changes by changing the environment to which we, in turn, adapt. They are also consistent with the work of Nolan (2003, p.18-30), who noted that technologies of material production, as of information processing, send ripples of change through all aspects of social life.

Second: area of differences and use opportunity

The findings showed a great similarity between the samples from both Tripoli University (urban) and Azzawya University (rural) residential areas, with similar levels of computer ownership and Internet use. This may lead to the view that in Libya new communications technologies, especially the Internet, have invaded these societies, as concluded by Miege (2007, p.7) who described 'La société conquise par la communication' ('the society invaded by communication'). These results are supported by Raba (2006) and Alghalban (2007). This is further evidence that Internet use is gradually breaking down the differences between urban and rural areas, allowing connections with the world and bringing societies closer to the global village and the new networked society.

The findings showed that 51.5% of rural student respondents claimed to have used the Internet for 1 to 4 years, compared to 43.6% of urban respondents. About a third of both groups had used the Internet for 4-6 years, and about a quarter had used it for more than 6 years. Also, around two thirds of the samples from both urban (64%) and rural (63.6%) areas used the Internet every day, and about a third of both groups used the Internet 3-5 times a week. This is consistent with the findings of

Ibrahem (2008) and Abo-Harara (2010), who claim that rural Libyan areas are developed in their use of the Internet.

Furthermore, the findings indicated that there was a similar level of use of home connections in both areas, which shows that in Libya both urban and rural university communities are connected to the global village to a similar extent. According to Sonaike (2004) Internet connections have gradually improved in the north of Africa. Urban respondent university students use mobile phone and cybercafé connections more than rural respondents, while the rural sample used university lab connections more than the urban sample. Respondents from both urban and rural areas noted a similar lack of difficulties using the Internet, although both noted connection costs as the most common obstacle. Control and monitoring were perceived as more of an obstacle by urban than rural respondents, especially by urban women. These findings are consistent with those of the Silatech Index (2011), Al-Shaebany (2007), Rabea (2006), Ibrahem (2008), Abo-Harara (2010) and Sonaike (2004).

These findings, therefore, show that social changes are being developed by the Internet in women's lives and in rural university society. Internet access has developed Libyan students' ability to communicate and participate online.

7.2.8 The digital divide and Libyan university student society

The gap of digital divide in Libya University students' lives has narrowed in some ways, even though the country still faces some real challenges and digital divide matters in some ways linked to the socio-cultural context. Van Dijk (2006, 178) noted: 'the gap between those who do and do not have access to computers and the Internet'. The majority of Libyan university' students have computers and access the Internet and students have access to the Internet by multi ways. This showed that there is no lack of 'physical access' to information technologies (Gorski, 2003) and no different 'level of ICT access' (Sukkar, 2004, p.27) between male and female university students in both urban and rural areas. Ragnedda and Muschert (2013, p, I) defined 'the digital divide as the unequal access and utility of internet communications technologies', but these Libyan university students seem to bridge the gap of opportunity of access and utility of Internet communication technologies as university society who have the same education level. Barriers to access were bridged in these Libyan university students' lives, and the majority of men and women in both rural and urban areas have opportunity of 'material access' (Van Dijk and Hacker, 2003) to network connections and computers. However, this discussion of narrow down of gap of use of the Internet would benefit from discussion of online interactivity because digital divide is not simply a matter of only access, but more complex and multidimensional phenomenon. There were some indications of a socio-economic digital divide in the fact that the cost of connection was identified as the most common obstacle to access. Equal level of education played a role on bridging the digital divide gap, as noted by Sonaike (2004), according to Chih et al., 2011, p.160) 'the lack of a college degree will result in more inequality issues'. However,

level of education helped to bridge the gap of digital divide between men and women in rural and urban areas and this led the Internet to play its role to emerge a "new society" as noted by Mahroum, (2011). Nonetheless, the digital divide is a problem which has socio-economic, demographic and geographic dimensions (Yuguchi, 2008), and it is a dynamic problem because new communications technologies are still developing day after day in different ways in both developing and developed countries.

7.2.9 Summary of measurement of Internet use and experience

To sum up, the discussion focussed on the way of the study finding which supported network society and global village theories. However, there were no statistically significant differences in experiencing use of the Internet between urban and rural areas, which is indicative of the 'rise of the network society in terms of the global village' (McLuhan, 1964, p.6). This could show the way that finding presented evidence of the ideas of Martin (1999), who noted that information transmission and processing abilities have the capacity to gradually change the key elements of societies such as major cities and towns in deeply rural districts. He also commented on the 'growing trend to small communities which are self-dependent except for their use of the new telecommunications highways' (Martin, 1978, p.8-12). It also consisted with Castell's (2007) observation of the trend for the new differential diffusion of information technologies in developing and poor countries or areas

> [W]here there is no electricity but there is some form of courage and mobile charges of mobile batteries in the form of merchant bicycles. Wi-Fi and WiMAX networks are helping to set up networked communities. With the convergence between Internet and mobile communication and the gradual diffusion of broadband capacity, the communicating power of the Internet is being distributed in all realms of social life, as the electrical grid and the electrical engine distributed energy in the industrial society (Castells, 2007, p.9).

Moreover, this study can mainly conclude that the developments occurring in Libyan university society is gradually narrowing down gap between genders and rural and urban areas. Those with the same level of education (in this case, university students) who have Internet access to interact easily with the global village. This was first commented upon by Martin (1977), who predicted that information networks used by everybody were likely to be the world of the 2000s (The Wired Society, 1977). He inferred the creation of these new information highways and a number of consequences they would have for the organisation of work, social relations, education, political life, and the environment and so on, which led him to sketch a portrait of an idyllic society. Therefore, understanding purposes of use, needs and gratifications brought about by the new technologies which play a role in developing users' lives and the environment in which they live, the technology changes by changing our environment to which we, in turn, adapt (W.F., Ogbum, 1947, p.81).

7.3 Use and gratifications

This second stage of the study findings discusses the motivations for Internet use and the gratification of needs in terms of social, cultural and political factors. It presents (1) the ability to gratify needs online; (2) the purposes of Internet use and social, cultural and political gratifications achieved thereby; and (3) a summary of this part of the discussion. This discussion would be explained under use and gratification theory framework, to answer questions of which data, how and in what way. This discussion would be explanation of data in chapter 5, section 5.4; it is grounded on discussion of previous studies (see chapter 3, section 3.4). Moreover, the interpretation details of the data are classified regarding objective 2 and study questions RQ4 and RQ5. This section starts by investigating users' ability to satisfy their gratifications by asking them whether they find navigating the Internet easy or difficult. This is followed by a discussion of the gratifications they satisfy.

7.3.1 Ability to gratify online needs / description of navigation

There were clear indications that respondents had no difficulties in using the Internet and gratify their needs (see chapter 5, section 5.5), and only a few users had some difficulties in satisfying their needs online. The findings also indicated that there is no statistically important difference between men and women with regard to using the Internet and satisfying their needs. Women were marginally (3%) more likely to say that they found it easy; though overall both genders find it easy to use the Internet. There is also little difference between urban and rural respondents: approximately 6% more urban than rural respondents indicated that it is easy. This demonstrates young people's experience of using the Internet, which is reflected in other studies.

With regard to the ability to satisfy needs, this is clearly an ability of online interactivity, and the current findings are consistent with the explanation of use and gratification theory regarding behaviour and motivation as outlined by Ko et al. (2005). The electronic information age is giving people more options in their use of media (Katz et al., 1973), which is a key aspect of use and gratification theory.

7.3.2 Measurement of needs and purposes of going online

The purposes of Internet use were investigated by asking users to describe these purposes on a Likert scale with options ranging from strongly disagree to strongly agree. Eighmey and McCord (1998, p.49-187) noted that use and gratification research is important for understanding consumer motivation and relating it to the use of multiple media such as television, radio and new media. However, the findings (see chapter 5, section 5.4) indicated that there were several important motivations that led respondents to go online. To understand how this could be explained, and in what way, Bela et al., (2001) noted that there are three key objectives for use and gratification theory including discovering what people do with media, the underlying motives for using media and the consequences of that use. Also Van Dijk, (1999) pointed out that the achievement of our needs, such

as the reception of a variety of information and interaction, passes through the network which provides all the needs of fundamental human choices. In addition, different users can use the same message for different motivations, gratifications and needs (Kitz et al., 1974). Thus media consumption of television, radio and new media can be more fully understood through use and gratification theory (Eighmey and McCord, 1998, p.49). To understand how this could be explained, and in what way, the finding noted that there is social, cultural and political motivation of use of the Internet.

7.3.3 Social, cultural and political motivations

The findings (see chapter 5, Section 5.6) indicated that: first, social motivations were among the most important purposes for using the Internet, which concurs with the findings of Al-Khauja (2000), Allagui and Kuebler (2011), Abod-her (2013), Quiring (2009), Hamdi (2010) and Rabea (2006). The respondents stated that they use the Internet to contact their online friends, to override local social monitoring and to share and discuss information with online friends. These behaviours can be explained by what James et al. (1995, p.30-50) described as 'learning' and 'socialisation', which are suggested as important motivations for Internet use. There were no statistically significant differences between the genders or areas. These social motivations for Internet use are consistent with the findings of McQuail (2001, p.64), who noted that there are new categories of people's media use, including personal relationships, personal identity and surveillance, and with those of Katz et al. (1974b, p.20), who emphasised the social gratification use of the media.

Second: cultural motivations were among the main reasons for going online, with respondents agreeing and strongly agreeing with the statement that they try to satisfy their needs of finding multiple forms of information, especially about international culture, obtaining information about life in other countries and being entertained. There were no statistically significant differences between the genders or areas. These findings conform to those of earlier studies, such as Louis (2003), Hamdi (2010), Koc (2007), Rabea (2006), Fauad (2009), Abod-her (2013) and Quiring (2009), who noted that cultural needs were a major reason for using the Internet. Additionally, Lin (1999, p.164-174) noted that the motivations for using the Internet are based on a range of factors, including entertainment, and Ferguson and Perse (2000, p.155-174) mentioned that the motivations for Internet use are entertainment, passing the time, relaxation/escape and social information.

Third: political motivations were also important motivations for using the Internet, with respondents reporting that they often searched for opinions about various issues, for political news and for political information from around the world. The findings indicated that there are no differences between men and women or between urban and rural respondents. These findings are consistent with previous studies such as Allagui and Kuebler (2011), Saidy and Al-Guery (2008), Stepanova (2010), Zoda (2011), Al-Raood (2012), Abod-her (2013) and Quiring (2009), who noted that political motivations are an important reason for using the Internet. This may indicate that, online, people are empowered

to act, communicate or participate in a broader society and in political processes, influencing people by increasing their self-esteem, political awareness, and self-efficacy (Lillie, 1997).

Fourth: other purposes and gratifications were identified by the sample, including studying, relaxing and enjoyment. There were no differences between men and women or between urban and rural respondents. Additionally, a review of previous research into these personal, social, cultural and political motivations, such as The Silatech Index (2011) and Sonaike (2004), was conducted. Also previous findings by Eighmey and McCord (1998, p.187-194) revealed the concepts of 'personal involvement' and 'continuing relationships' as new motivations for using the Internet.

7.3.4 Summary of the purposes and gratifications of Internet use

With regard to the motivations for using the Internet, the current findings support use and gratification theory, to understand how, this can be seen as consistent with Kaye (1998, p.34), who identified five reasons for using the Internet: information, social interaction, passing the time, escape and web site preference. It is also consistent with December, (1996) when he used uses and gratifications theory to argue that there are three broad reasons why people use the Internet: communication, interaction and information. Moreover, these findings are supported by many authors who believe that the uses and gratifications obtained from each form of interactive media and the social origins of these uses and gratifications need to be precisely identified (Katz, Blumler and Gurevitch, 1974, p.19-32, Morris and Ogan, 1996, p.39-50). This has implications for the power of the Internet as an influence on people's lives through the relationship between use and gratification and interactivity. The Internet is gradually influencing users' social, cultural and political lives, as is clearly evident from these findings, and this is subsequently led to the identification of the role of communication in economic, political and cultural social change (Giddens and Duneier, 2000). This may explain the wide interest of Libyan university students in using the Internet and identify how the influence of the Internet and the relationship between communication and social change reveal the extent to which 'the media agenda affects the public agenda, and the public agenda affects the policy agenda' (Littlejohn, 2002, p.320). This can be more fully illustrated in the measurement of online interactive behaviour, which is discussed in the next section.

7.4 Social, cultural and political impacts of the Internet

The third section presents (1) online participants' interactions, including social, cultural, political and personal factors; (2) awareness and willingness to engage in navigation of sites, including measurement of users' favourite sites, daily browsing map, awareness and the factors that persuade them to navigate sites; (3) measurement of users' navigation and online interaction; (4) a summary of this part of the discussion. This discussion would be explained under interactivity, agenda-setting theories framework, by answering the question of which data, and in what way. These would be

explanation of data in chapter 6 section C: 6.2. Moreover, the interpretation details of the data are classified regarding objective and study questions RQ6, RQ7 and RQ8.

This section set out to measure the role of the Internet and investigate the relation between the Internet as a communication medium and social change. The online social, cultural, political and personal interactions of the respondents were surveyed, and their awareness of navigating on the web was assessed by investigating their favourite interactions, the sites they browse every day, the elements that persuade them to browse a site and which sites they are interested in. The findings regarding Internet use and gratification illustrate the role of communication in the social, cultural and political lives of users and more generally the role of communication in promoting social change by anticipating the impact of the Internet on these factors. By analysing the experience, needs, gratifications and awareness of users developed by their time spent online engaged in interactions, a clearer picture of the influence of the Internet emerges. This in turn will indicate the importance of the Internet in its 'emergence in cultural life, in the public sphere, in culture, in social consciousness, or in the field of social interaction and principles' (Hankiss, 1988, p.22).

7.4.1 Online participants' interactivity factors

The results (see chapter 6, section 6.2) showed that to a large extent the sample students from both Tripoli and Azzawya universities interact online frequently. To understand how, Steuer (1995) defined interactivity as the extent to which the medium allows the participant to modify the content or form of a mediated environment in real time (cited in Chung, 2007, pp.43-61). This online interactivity as a communication through the Internet improved participants' lives by allowing them to be part of the global village at the time of information age; the Internet as a media plays its role in telling those users what they follow and what is more important (McCombs, Shaw and Weaver, 1977, p.5). Furthermore, to understand in what way the findings support this; the changes might happen in societies as with the online interactivity those are opened to be part of the global village. This might lead to other improvements in society through users' social, cultural and political behaviour that caused by the influence of new kind of communication. Social change comes about through Internet use when people have access to a wide range of different types of information. This could gradually enable all members of all societies to benefit from the digital revolution, because information can raise people's awareness and knowledge, and also because the Internet is strongly linked to education and information of many types. Indeed, it is in universities and research institutes that electronic networks were initially developed and widely used (Cantoni et al., 2009). In addition, the Internet as a tool of information culture, the functionalism of social change through use and gratification and the agenda-setting process, might be constructed, using the theory of interactivity, into a framework for explaining the factors of social, cultural and political online interactivity that the study has already identified and discussed. To understand how findings supported theories; social, cultural and political online interactivity would show how and in what way.

7.4.2 Social, cultural and political factors

Analysis of findings (see chapter 6, Section 6.2) indicated that, first: social interactive behaviour was one of the main activities engaged in by Libyan university students when they go online. These online interactivities include chatting with friends and escaping local social pressure. This is consistent with studies which have investigated Internet use in Arab societies, such as Al-Khauja (2000), Mourtada and Salem (2012), Al-Saidy and Al-Guery (2008) and Al-Shaebany (2007). These further explain the idea of Castells (2007), who pointed out that the variety of social software and tools now available have provoked the development of the interactive communication networks. This forms a specific type of interactivity emphasised by Van Dijk, (2006a, p.9) as 'behavioural interactivity', which he described as the extent of control that every party in the interaction exercises.

Second: the findings also indicated the respondents' interest in online cultural interactivity for the purposes of leisure, entertainment, listening to music, playing games, finding new ideas and answering questions. The very few significant differences which were observed between any of the variables are noted in between agree and strongly agree and also in the degree of disagree and strongly disagree. There were no statistically differences between genders or areas. This is consistent with Hamdi (2010), who noted that the Internet plays a huge role in presenting other cultures, while the Net-generation finds the Internet easy and comfortable to use and entertaining, and that it enables them to reveal their feelings, express their views and care for others online.

Third: the findings indicated that the respondents valued political online interactivities, including the ability to enjoy freedom of speech, to follow international and local news and to discuss various political issues with friends. These factors were seen for example in the Arab Spring and they are important elements in developing the awareness and ability of Arab societies to establish and promulgate the ideas behind the Arab Spring. According to Mahroum (2011), 'the great Arab revolution that we are witnessing today is the first real revolution that is the work generation as they are known in the West, a generation that grew up digital'. There were no statistically significant differences observed between genders or areas. The findings are consistent with previous literature such as Al-Raood (2012), Saidy and Al-Guery (2008), Stepanova (2010), Allagui and Kuebler (2011), Mourtada and Salem (2012), Fauad (2009) and Philip (2011).

Fourth: the surveyed Libyan university students agreed and strongly agreed that personal online interactivities are one of their main forms of online behaviour. This is consistent with the findings of Louis (2003) in previous studies, when he noted that there is an important relationship between the attributes of the Net-generation and the gratification it obtains from the Internet. Louis pointed out that use and gratification theory offers a well-established set of predictors of the cognitive and affective gratification obtained from media use.

Therefore, personal use of the Internet, which includes doing homework and fulfilling personal needs, was identified as an important type of online interactive behaviour. Also, these findings show the

impact of globalisation in third world countries (Sonaike, 2004). Therefore, to understand how and in what way, these students' university societies have been influenced by the new type of life resulting from the impact of the global village in term of media and communication. This is especially from interactive computing systems that allow interactions between humans in human contexts (Dix, et al., 2004). Much daily social, cultural and political interaction is now conducted through the Internet, which influences users' lives, and as a consequence there have been many major structural changes in society (Van Dijk, 1999). Also these findings support Castells' (2007, p.147) definition of the Internet 'as the digital media which is more interactive than traditional media; they enable a shift in the balance of power to the user and the side of demand'. Also, the findings are consistent with the idea that social changes occur under three basic headings, economic, political and cultural (Giddens and Duneier, 2000).

7.4.3 Awareness and willingness to engage in navigation on the Web

The findings (see chapter 6, Section 6.2.16) noted that a large number of the respondents expressed interest in using the Internet and interacting online interactivity. Moreover, the findings showed that the users are aware of and knowledgeable about what they do online. Also, as discussed above, they find interacting online easy and mentioned what factors persuade them to browse sites. To understand how, the Internet's role as a media role and in the agenda-setting process can be seen here by measuring the participants' favourite sites, daily navigation maps and the factors that persuade them to browse sites because the Internet plays a role in telling them what to follow and what is important (Rogers and Dearing, 1988). This could be explained by agenda-setting at two levels in the way that, those participants use the Internet easily, they have favourite sites and they have daily map. Those together could explain influence of Internet content; social, cultural and political information which play an important role in their lives.

7.4.4 Measurement of users' favourite sites

It was important to measure users' awareness of browsing the Web, which is an important factor in analysing online interactivity and the satisfaction of needs, in order to identify what they think is important when doing so, reflecting the first level of agenda-setting. Their navigation of these favourite sites put them in filter bubble when users are effectively isolating themselves in their own cultural or ideological bubble. Therefore, favourite sites or groups could be society which puts those users in its bubble idea and way of thinking (filter bubbles theory). To understand in what way, it might tell them what to think about and this would be driven by the personalized searches with the algorithms behind websites which guess what information users would like to see. It is based on their search history and past click-behaviour (Hossain, (2016). Nearly half (42.7%) of the respondents had favourite sites which they visit (see chapter 6, section 6.2.17). A similar investigation was conducted by Abod-her (2013), who found that experience of using the Internet allows participants to be more

aware of meeting their needs. There is only a small difference between men and women, and nearly half of women having favourite sites which they regularly visit compared to more than a third of men. Moreover, the findings indicated that there is a slight difference between urban and rural respondents, with more than half of the urban respondents having favourite sites compared to less than half of the rural respondents. This might be attributed to the level of experience of using the Internet, and the habits formed in browsing the Web, as reported by Dunleavy and Weir (1998).

7.4.5 Measurement of users' daily browsing maps

In relation to Internet users' awareness of fulfilling their needs, the findings indicated that more than two thirds have sites that they browse every day, with large similarities between men and women, as well as between urban and rural respondents (see chapter 6, section 6.2.18). Browsing these sites every day is one way in which users can find what they want and engage in interactions they enjoy, thus becoming an activity which 'provides all needs of fundamental human choices' (Duchastel, 2000). To understand how and in what way, the role of the Internet can be seen in Internet power, which might lead the participants to browse special sites every day. This could be the work of the agenda-setting theory process, which causes some sites to be trusted or thought about more than others. According to Wilson et al. (2001, p.14) the media uses gatekeeping and agenda-setting to control our access to news, information, and entertainment. Also, filter bubbles theory is a matter here as browsing daily map could achieve this bubble which may filter content and then influence participants' way of thinking. There is real opportunity to influence how they think.

7.4.6 Awareness of interactions with Internet content

In addition to samples high level of awareness, more than two thirds of the respondents were interested in sites' title and content, while the others were only interested in content (see chapter 6, section 6.2.19). This showed a high awareness of the Internet content which persuades users to interact with websites. To understand in what way, Couldry et al., (2003) emphasised that persuading is: the media seeks to influence opinions directly. This relates to the role of the Internet as a media role through the second level of agenda-setting, which determines what parts of a subject are important (Rogers and Dearing, 1988). These results could also be deemed an awareness of the motivations of use: as Hultman argued, 'the purpose of all human behaviour is to meet needs' (Hultman, 1979, p.4). From another side, regarding filter bubbles theory, this will make users become separated from information that disagrees with their point view, moreover, 'people's opinions might be steered by personalized media' (Borgesius, et al., 2016), while they are not aware of being influenced.

7.4.7 Awareness of users, differences between genders and areas

These findings showed that Libyan university students were aware of for what and how they use the Internet and that they are interested in being social, cultural and political online participants. They

fulfil and gratify their needs, and there is evidence that the content of sites persuades them to browse a site, showing the role of Internet content as a media role. Moreover, the Internet texts, audios and videos content power as a media role is playing its role in participants' lives and can be seen through their daily online interaction which includes gratification of their social, cultural and political needs as noted in (section 6.2) and online participants social, cultural and political interaction (section 6.3). Therefore, measurement of use purposes, social, cultural and political needs gratifications, samples, Internet use awareness including their own browse map, their daily browse map and elements persuade them to browse sites conclude Internet power as a media role explained through agenda setting 1st and 2nd levels. To understand how an in what way, this discussion consists with Couldry et al. (2003) who identified five functions driving media power: first, news making, since the media determines what will be news; second, agenda-setting, because the media does not just select the news but also selects what is covered; third, interpreting, because the media interprets the news as stories; fourth, socialising, the process by which users learn social and political values through the news, entertainment, sport and advertisements; and fifth, persuading, as the media seeks to influence opinions directly. In fact the power of the Internet is not measured only through daily map, favourite sites or elements persuading to navigate a site, but starts from the first Internet use and the first online interaction, although it does become clearer in daily online behaviour driven by Internet content power: 'the media plays a key role in setting the creators' political agenda by determining what news to cover, how much, and in what context' (Dye, Schubert and Zeigler, 2011). However, participants who have favourite sites browse sites every day and follow sites because their title and content are influenced by the Internet's content power, which make them interested in some sites and some contents. Wilson et al. (2001, p.14) noted that the media uses gatekeeping and agenda-setting to 'control our access to news, information, and entertainment'. Moreover, media role process is explained through the agenda-setting process: the first level of agenda-setting enacts the common subjects that are most important, influencing what people should think about.

Furthermore, Libyan urban and rural university male and female students' interest in a site's content shows the way it's consistent with the second level of agenda-setting: media content decides what parts of the subject are important, and the media focus on the characteristics of the issues that people should think about. This process occurs gradually through participants' experience of Internet use and gratification of their needs. This is consistent with the argument of Littlejohn (2002, p.320) that 'the media agenda affects the public agenda, and the public agenda affects the policy agenda'. Moreover, the agenda-setting power of the Internet is shown by users' awareness when they satisfy their online social, cultural and political needs: attitudes and behaviour 'are usually governed by users' awareness influenced during their online interactivity when they satisfy their online social, cultural and political needs.

7.4.8 Sites navigated and online interaction

The second investigation of this objective asked university students to indicate the extent to which they browse and online interactivity on Web 2.0; email, Messenger and Skype, YouTube, Facebook, academic sites, Google, commercial and shopping sites, international and Libyan news sites, sport and music sites and personal needs sites (see chapter 6, section 6.2.20 - 6.2.31). Seeing which of these sites are frequent, and analysing the content of them, can give an understanding of the power of the Internet and the type of online interactions that respondents conduct. On the Internet it is easy to identify the direction of those influences, and the results may also be useful for market research (McCombs, 2005, p.543-557). The findings indicated three frequencies of site navigation: always, usually and rarely.

7.4.9 Always, usually and rarely navigate

According to Gitlin (1980), people have found themselves relying on mass media to provide a conceptualised image of the real world. This was clear in the study findings (see section 6.2), which indicated that, first: respondents always navigate Facebook, supporting the finding of the Arab Social Media Influence Summit Report (2015, p.20-21) that 93% of Libyan users are using Facebook. Google, Libyan and international news sites and YouTube were also almost always used daily by the participants. Consequently the current results add to the body of literature on social media participants and are consistent with the findings of numerous previous studies conducted by Philip (2011), Mourtada and Salem (2012) and Ali and Fahmy (2013), of previous Libyan studies conducted by Ziany (2010) and Abod-her, (2013), as well as of Arab studies conducted by Fauad (2009), Allagui and Kuebler (2011) Zoda (2011) and Al-Raood (2012). To understand how and in what way, therefore, social media plays a large role in society as a new type of interactive communication, and several commentators have attributed the events of the Arab Spring to the rise of Internet use in the region. For instance, one study claimed that 'people via social media found their voice to bring about justice and they gained a sense of freedom from these technologies' (Ali and Fahmy, 2013, p.61). Furthermore, the fact that the respondents so frequently visited Libyan and international news sites indicates that political issues are an important reason for going online and interacting with content. This is largely because the Internet features allow for anonymity which in turn motivates users to speak more freely than they would in real life (Ryan, 1995). There are many similarities between genders and areas in terms of the most frequented sites. This may be indicative of the ways in which the Internet breaks down boundaries between genders and areas of residence, which were formerly strong elements in the features of local Arab societies, as the image of an Arab woman is that of a marginalized, secluded, and oppressed second class citizen (Elsafty, 2005).

Second: usually navigate; the findings indicated that sites of secondary interest were emails, Messenger and Skype, academic sites and sports and music sites. This is consistent with Castells (2007), who pointed out that the variety of social software and tools now available have provoked the

development of an interactive communications network. This forms a new media which allows users to be active participants: 'digital media which is more interactive than traditional media; they enable a shift in the balance of power to the user and the side of demand' (Van Dijk, 2005, p.147). To understand how and in what way, these findings confirm that users' actions bring them into contact with varied content such as text, graphics, animation, video, audio and games (Bucy, 2004). Social media and other interesting sites which respondents browse every day could be implicated in the process of framing, which argues that, in addition to telling us what to think about (first level of agenda-setting), the media also tell us how to think about it (second level of agenda setting) (Cohen, B. 1963, cited in Maxwell E. McCombs, (1992). More deeply, with filter bubbles theory it could see that participants receive and interact with content choices by algorithms which are not transparent which have an impact in some ways on what they are doing and what they think about. Therefore the influence of the social media was exaggerated, giving Facebook credit for starting the revolution (Ali and Fahmy, 2013, p.62).

Third: rarely navigate; the findings indicated a very low level of interest in browsing Twitter in comparison with Facebook and Google.

7.4.10 Gender and area differences of sites navigated

In response to objective 5, the findings indicated that Skype was less commonly used in rural areas, whereas Facebook, Google and international and Libyan news were widely used by both genders and in both areas of residence. Additionally, urban women were slightly more interested in browsing YouTube than were rural women.

With regard to the kinds of sites which university students were interested in browsing, the findings indicated that social, cultural and political sites were viewed always or very often by a majority of respondents. To understand perspective of this finding, communication through these sites plays a role in social networks, providing clues as to what people are reading, listening to or watching (1st level of agenda-setting) to achieve personal gratification when they interact online and develop users' points of view (2nd level of agenda setting) (MacCombs, Shaw and Weaver, 1997, p.704). Therefore, to understand how, this interactivity gives users the ability to be creators and a relation between communication and social change is implied, as noted in chapter 6 by Johnson, (2001) who pointed out that in society all classes of people, regardless of caste, gender, age and educational status, now have equal access to the same information and they are now aware of equality and freedom. Rural societies are active rather than passive in the communication process. Also, these findings could be support what Miege, (1997, p.137) argued when he noted that communication has invaded society and is currently changing and reorganising its social and cultural aspects: 'Les techniques de communication donnent la possibilite' ('new communication technologies are creating the possibility of unleashing social change').

7.4.11 Summary of discussion of social, cultural and political role of the Internet

The findings on online social, cultural, political and personal interactive behaviours (see section 6.3.1) reflect the observation that much of online behaviour is based on the ability to communicate (see section 5.4.1). This supports interactivity theories as framework theory to explain and discuss study finding. To understand how; Rafaeli (1988) pointed out that interactivity in a communication setting is associated with the attitudinal dimensions of acceptance and satisfaction and related to sense of fun, cognition, learning, openness, frankness and sociability. According to Bucy (2004), the term 'interactive media' normally refers to products and services on digital computer-based systems that respond to users' actions by presenting content such as text, graphics, animation, video, audio or games. Although technologies are not the only factor, they might be an important factor in social change, which can result from interaction (Ogbum, 1947). The change occurring in communication is interactive, which allows users to be participants on the electronic information highway, Martin's metaphor for societal change, and causes global changes to fit into local societies, leading to technological activity located away from cities in more traditional communities (Martin, 1978, p.8-12). The improvement of the ability to gratify online needs through interactive communication could in turn improve satisfaction, at least in some settings (Applegate et al., 1986). Therefore, to understand in what way finding support theory, the forms of Internet agenda setting could imply the power of the influence of the media, but it is important to remember that in an interactive communicative paradigm users can become participants and creators, and thus the mechanism of agenda-setting has been identified: it emanates from the side of creators, whose media productions may exert great influence on audiences. However, traditional agenda-setting at the first and second levels can still function in this interactive context: the Internet tells users what to follow (1st level) and what is more important (2nd level) (Rogers and Dearing, 1988). New Internet Web 2.0 networks randomly make users more like participants than a simple receptive audience, so they can now be considered creators who are part of the equation of influence. Thus the agenda-setting explanation can be used as a tool to understand the role of the Internet from the senders' point of view, while use and gratification theory is a tool to understand this influence from the users' angle. Use and gratification theory, agenda-setting theory, filter bubbles theory and interactivity theory offer framework for understanding the role of communications technology in social change, such social media usage can lead to social change (Jennifer James, 2013). Therefore, the way is that widespread success of particular interactive media is important in producing the critical mass needed to provoke social change and to create the possibility that interactive media might facilitate major changes in social life (Rogers and Dearing, 1988). The behaviour of individuals and the collective might lead to a gradual significant change: Gray-Felder and Dean (1999. p, 4-8) encouraged 'using communication processes and media to persuade people to increase their knowledge and change the behaviours and practices that place them at risk'. Social media can facilitate social change through eight mechanisms: gathering advocates, allowing ideas to develop, forging an authentic voice, creating sustained conversations,

being approachable, identifying core demographics, developing conversation and being innovative in their approach (James, 2013).

7.5 Users as participants rather than audience members

The fourth part (see section 6.3) presents (1) users' online behaviour; (2) their opinions about the Internet; (3) their feelings about the Internet; and (4) a summary of this part of the discussion. This discussion would be explained under online interactivity, social change and second society 'new society' framework theories, by answering questions of which data, and in what way. These would be explanation of data in section 6.4. Moreover, the interpretation details of the data are classified regarding objective and study questions RQ9/ RQ10.

The development of the 'new type of society' described by (Van Dijk, 1999a, p.23, Mahroum, 2011) is a result of the use of the Internet and the satisfaction of needs through online social, cultural and political interactions. The finding discussion illustrates the way of online interactivity theory framework (see chapter 3, section 3.4). To understand how and in what way, the online interactivity allows users to be creative: they can read, write, listen, watch, send, receive and publish content and information. It is new Internet which rose by Web 2.0 website's variety of features and applications. Therefore, the variety of social software and tools has provoked the development of interactive communication network (Castells, 2007), and 'social media users generally hold positive views on its impact on, and potential for creating social change. Ultimately, social media is being seen and used as an agent of change' (Arab Social Media Report, 2012, p.6). Moreover, the Internet is playing an important role in the participants' lives that is reflected in their opinions and feelings, which this study seeks to identify. The Internet is a powerful means of communication and has led to the development of Libyan society and the emergence of a new society in the information age. New communications technologies, especially the Internet, have improved the levels of interactivity enjoyed by audiences and later users, and enabling them to become participants. As a result, mankind is at the dawn of a new era, that of the age of enlightened communication, to the extent that 'participants who use social media for making change in society can use it to plan both in real life and in virtual life; meeting, keeping followers informed about events and news and gain followers' (Sheedy, 2011, p.25). Importantly, the emergence of a new society can be seen in online interactive behaviour which is a new step of the awareness and effectiveness of the role of the Internet. This second or new society has grown on virtual networks, on pal-talks, YouTube videos and social groups across various platforms on the net. It is a society that thrives on modern and effective 'mobilisation structures' (Mahroum, 2011).

7.5.1 Libyan university students and online interactive behaviour

The surveyed Tripoli and Azzawya university students were asked to describe their online interactive behaviours with relation to the content of websites. Such Internet content might include text, photos or videos that participants can interact with in a variety of ways.

The findings (see analysis in section 6.3) indicated that participants were very interested in interacting with Internet content, and they described six interactive behaviours: reading articles, sending them to their friends, re-publishing them on their own social media pages, watching videos and sometimes saving or printing out content on their computers. These were classified according to frequency: always, very often and sometimes. Participants' common interactions included reading, writing, watching and publishing Internet content, which supports the findings of earlier studies of Arab and Libyan Internet use, such as Alghalban (2007), Ali and Fahmy (2013), Mourtada and Salem (2012), Figueroa et al. (2002) and Aibraheem (2008). This illustrated the way of how the findings are theoretically consistent with the explanation that 'large audiences are influenced by reading, hearing or watching messages used by great professional communicators such as writers, reporters, and editors' (Sanchez, 2002). These online activities of reading, writing, watching, publishing and sending of Internet content are equally common for men and women and for participants in both rural and urban universities. It may be concluded that the Internet has enabled participants to enjoy equal opportunities and new possibilities within a new society which has emerged as a result of the role of the Internet in the lives of university students.

With regard to the discussion of the findings from online interactive behaviour, this leads to understand the way that they supported interactivity theory. It notes that the role of the Internet: online interactive behaviour is identified as a mechanism of agenda setting, which, according to Rogers and Dearing (1988), has led to the widespread success of particular interactive media thereby producing the critical mass needed to bring about playing a role in social change. These findings are consistent with the idea of many authors who believe that the uses and gratifications obtained from interactive media and the social origins of these uses and gratifications need to be precisely identified (Katz, Blumler and Gurevitch, 1974, p.19-32, Morris and Ogan, 1996, p.39-50). Finally, the Internet gives users new features so that they can be proactive in their media use, allowing users to become creators with power of action. Rogers (1988) pointed out that the widespread success of some interactive media is important in producing the critical mass needed to create the possibility that interactive media might facilitate a major change in social life (cited in Dimmick, Kline and Stafford, 2000). This power illustrates the process work of agenda-setting, which functions through online interactivity. The media productions of all creators may exert great influence on audiences.

7.5.2 Libyan university students' opinions of Internet use

In general, the opinions of the Libyan university students about the Internet were highly positive, and they saw it as a helpful addition to their lives (see data analysis in section 6.3.8). The overwhelming majority believed that the Internet is an open and easy means of communication, entertainment and study, that it makes users more active, improves society, is more interactive than old media and is important in users' lives. Also, the majority of participants believed that the Internet has not had any negative influence on society and does not harm local cultures. These findings are consistent with Eugene (1979), who noted that 'attitudes and behaviour are usually governed by cognitions –what a person knows, thinks, and believes'. To understand this, positive opinion about the Internet led users to believe and then it plays a role in their thinking way.

The findings indicated some small differences between different groups of respondents. Urban respondents were more likely to think of the Internet as a means of entertainment than were rural respondents, while rural respondents were more likely to think of the Internet as a useful means of studying. However, these differences are not statistically significant and were not large (within 10%). Furthermore, no statistically significant differences were observed between men and women. We can conclude that the variables of gender and areas did not influence users' opinions and that they all consider the Internet an important means of communication. To understand how, and in what way the finding supported theory, this finding is mainly consistent with Gitlin (1980), who stated that people found themselves relying on mass media to provide a conceptualised image of the real world. It also concurs with the literature which reported that users are more and more reliant on the Internet (Rabea, 2006, Aibraheem, 2008, The Silatech Index, 2011, Shen and Shakir, 2012).

7.5.3 Libyan university students feelings about Internet use

The findings noted that respondents felt positively about the Internet and had no negative feelings about it (see data analysis in section 6.3. 19). This finding is the last step of examination of the results of online interactivity and the potential development of a 'new society' which has emerged through the interaction between Libyan university students and Internet content. Also, this showed measurement of feelings as a last step of examination of the role of the Internet through an investigation of its uses and gratifications, online interactivities and users' opinions and feelings about it.

To understand how and in what way finding consist with farm work theory; the development of society is occurring through the contributions that modern-day communication allows people to have. According to Gray-Felder (1999, p.4-8), communication can make greater contributions to the pace of development and using communication processes and media leads users to increase their knowledge and develop their behaviours. One consequence of agenda-setting is that the media might direct

audience behaviour (Eugene, 1979, p.101), and this behaviour would then change according to respondents' feelings, which have in turn been influenced by their activity online.

7.5.4 Social, cultural and political feelings

The findings (see section 6.3.19) indicated that, first: about two thirds of the respondents felt that the Internet expands their relationships, helps them to be closer to their friends and enables them to stay close to their families. This confirms that Libyan university students were interested in using the Internet for social interactions and satisfactions. Moreover, these findings were similar for both genders and areas, with the only noticeable difference being that women more than men felt that the Internet expands their relationships. This might be attributable to the fact that in Arab and Libyan society women have fewer opportunities to enjoy friendships and relationships outside the immediate family. That the findings indicated no statistically significant difference between rural and urban respondents shows the extent of the Internet's influence on Arab society.

Second: the findings indicated a positive feeling among the sample towards the Internet, which could explain the cultural satisfaction of those using it. They felt that it makes them active members in a modern society, that it helps them to develop and encounter ideas and that it does not harm society. This confirms the power of the Internet in participants' lives, which has been improved with online interactivity. This feeling is shared by both men and women and by rural and urban university students, showing the Internet's profound impact on users regardless of gender or place of residence.

Third, the findings indicated that participants felt positively about their online political interactions and gained satisfaction from them, believing that the Internet allows them to express their opinions comfortably, improves their political ideas, makes them feel comfortable and free and offers them a means of freedom. Access to the World Wide Web has enabled Libyans to breakdown the control of the closed Gaddafi regime and to develop those students' new society via using new communications technologies that allow them to be freer and more effective. The feelings of both genders were largely the same, although women felt that the Internet improved their political ideas slightly more than did men. Moreover, the findings indicated similar positive feelings among both rural and urban participants, the only difference being that the rural sample believed the Internet to be a means of freedom more than did the urban sample. In this respect the findings add to those of earlier studies of Arab and Libyan Internet participants, and confirmed that young people feel comfortable going online, as reported by Quiring (2009), Figueroa et al. (2002), Johnson (2001), Abo-Harara (2010) and Stepanova (2010).

To sum up, for understanding how and in what way finding consist and support use and gratification, agenda setting and online interactivity theory framework. The participants' opinions about the Internet might have developed through their use of it and their satisfaction of their needs online, as well as through their online interactivity. Respondents' opinions showed the power of the Internet to focus

public discussion on special matters, and while it cannot tell audiences what to think (1st level), it can tell them what to think about (2nd level) (Rogers and Dearing, 2000), and impact on them at both levels. Therefore, positive opinions about Internet use might be developed through the role of the Internet in the agenda-setting process in the context of online interactivity. If the traditional news media influence how important the public perceive issues, Internet users take agenda-setting a step further by compounding the first and second agenda-setting levels. It is important to note that the power of the Internet is shown by the participants' positive feelings about the Internet. Therefore, the current findings indicate the positive social, cultural and political feelings about the Internet of Libyan university students. The filter bubbles theory also could be seen in this finding as satisfaction, gratification, opinion and feeling of users come from their achievement of their online needs that might be a kind of bubbles. This could be algorithms or a kind of groups also a kind of bubbles.

Particularly, to understand how and in what way, this indication of participants' positive opinions and feelings about the Internet may help to confirm how the influence of the Internet influence evolves, starting with the motivations for use, through the needs satisfied, online, social, cultural and political interactive factors, online behaviour and opinions and feelings. The uses and gratifications theory explains users' behaviour by understanding what is happening when media are used. Agenda-setting explains the role of the Internet from the perspective of creators or senders of media content. Communication has a role in social change and, according to Backer (2001), behaviour is more likely to change if the person forms a strong positive intention, or makes a commitment, to perform that behaviour. Opinions and feelings could be built through the attitude of developing when engaging in online interactive behaviour and through 'cognitions –what a person knows, thinks, and believes' (Eugene, 1979, 101). Technologies create new conditions of life by changing our environment, and we adapt to these changes (Ogbum, 1947). Society has been invaded by communication and there has been significant development as a result of new communications technologies, especially the Internet (Miege, 1997).

7.5.5 Summary of the discussion of users as participants rather than audience members

The new media, especially the Internet, allow users to be participants through online interactivity features. The respondents' online interactive behaviours include reading, writing, watching, publishing and sending multiple types of contents. Social media, especially Facebook, is widely used by the participants and comprises online activities that all users' online behaviour is communication. Therefore, to understand how and in what way theory framework explained this finding; 'behavioural interactivity' is the extent of control that every party in the interaction exercises: it is 'the digital media which is more interactive than traditional media; they enable a shift in the balance of power to the user and the side of demand' (Van Dijk, 2006a, p.9). Communication can make large contributions to development and to changes in behaviour (Gray-Felder and Dean, 1999, p.4-8). When communication causes social change, people themselves define such change, for example printing

played a huge role in changing the life of people and society (Gray-Felder and Dean, 1999, p.11). The Internet as a new communications technology in the information age is playing its role in developing a 'new type of society': it is 'gradually taking over from the mass society that emerged from the industrial revolution and expanded into the twentieth century' (Van Dijk, 1999a, p.23). This could be seen as one way in which the Internet is leading to social change. Social change is a term used to define changes in a social structure, and in sociology it refers to any significant alteration in behavioural patterns and cultural values. The findings showed that respondents held positive opinions about the Internet and about its interactivity and ability to satisfy their needs. Backer (2001), noted that behaviour is more likely to change if the person forms a strong positive intention, or makes a commitment, to perform the behaviour, so we can conclude that the respondents' strong positive feelings about the Internet may be more likely to lead to social change. Furthermore, the study findings clearly identified the positive online social, culture and political feelings of the participants. This refers to the 'notion of social progress or socio-cultural evolution, the philosophical idea that society moves forward by dialectical or evolutionary means'. Regarding to results of investigating Libyan university students, the Internet is playing a role in social change and in the emergence of the 'new type of society' suggested by Van Dijk (1999a, p.23) and the 'Arab new society' suggested by Mahroum, (2011) (see section 3.8)

7.6 The development of a "new type of society"

The fifth section presents a discussion of (1) university students at the time of online interactivity, and gratification; (2) Internet power, communication and social change; (3) Internet users as participants rather than an audience, similar opportunities and online interactivity; (3) the opportunity for the rise of a new society; and (4) research reflection and limitations, contributions and recommendations for further research. This discussion would be explained under information age, use and gratification, agenda-setting, communication and social change framework theories, and mainly theory of second society, 'new society', to answer questions of how and in what way. In fact discussion would illustrate if data support, extend or contradict this theory. It would be the point of answer RQ11 that resulted from the wide presentation, process framework theories and analysis of study results. It is based on the contribution presented above in sections 7.2 through 7.6.

To summarise the results, it can be concluded that a new society has indeed arisen through the role of the Internet in Libyan society especially in the lives of university students. To understand how and in what way theory framework explained these; ICTs have quietly developed as a subspace of networking for the exchange of ideas in these countries which is leading to the emergence of a second society in Arab countries (Mahroum, 2011). According to Hankess, the concept of a 'second society' refers to those social changes that have led to a 'new society', including the creation of a second economy, second public life, second culture, second social consciousness and second sphere of socio-political interaction (Hankess, 1988, p.22-28). These spheres of social and political interaction are

complex in the face of modern networks and mechanisms, and can include a 'parallel society, second polity, independence society, alternative system' (Hankess, 1988, p.28). Moreover, Dinnis and Johan (2010, p.1) pointed out that social and technological developments have led to the evolution of a virtual world that could be called a 'second society'. Therefore, emergence of a 'new society' can be discerned from the role of the Internet in young Libyan university students' lives.

7.6.1 Libyans university students in the information age

At the time of the mushroom of universities in the Arab world, level of education is an important factor helping the Internet to play a crucial role in developing a new type of society (Mahroum, 2011), so it is perhaps to be expected that those with a university education display similar daily online activities regardless of gender or area. The study results and ensuing discussion have suggested that the Internet use in Libyan university students' lives has led to the development of a 'new society'. Moreover, the majority of Libyan university students have the same opportunities to go online and therefore this showed evidence of similar rates of social, cultural and political interactivity.

To understand how and in what way theory framework explained this finding; Mahroum, (2011) emphasised the expansion of universities in the Arab world as a factor that has led to the emergence of a new society: (see section 3.8) 'Arab youths were finding several benefits to being at university: a new space for association, networking, and the exchange of ideas and sentiments'. University students with the same education level have the same level of access to the Internet, and this has allowed the development of online communication, which plays an important role as 'behaviour interactivity' (Van Dijk, 2006a, p.147). This study's results regarding Internet use, gratification and online interactions, especially the very high rate of usage, demonstrate that Libyan university students' society has indeed passed into the information age and the global village through use of new communication technologies. The term "information age" has been used by many authors to introduce the concept of globalisation in everyday life (Albrow, 1996, Fuller, 1996, Melucci, 1996, Garon, 1999, Webster, 2005, Castells, 2010, 2011, Devriendt et al., 2011). It is another indication of the rise of the global age based on the everyday use of new communication technologies, as this study has indicated with regard to Libyan students. Castells, (2007, p.29) argued that 'societies are passing from the industrial age into the information age' (see also 2000a, 2000b). This has taken place through the advent of new communication technologies in Libya. Therefore, these new communication technologies have enabled globalisation in terms of communication, leading to the rapid growth of digital communication and consequent changes in the nature of human activity. The organisation of work and private life, for example, has been changed by information and communication technology (Miege, 1997). Nolan (2003) claimed that new technologies can be considered a basis of social change. Therefore, the results of this study could be further explained by the concept proposed by Castells, who emphasised that power now rests in networks: 'the logic of the network is more powerful than the powers of the network' (quoted in Weber, 2002, p.104). Thus, for Castells, the

network society is the society that goes beyond the information society (Castells, 2011). The important role the Internet plays in the respondents' lives leads to development of a 'second' or 'new type of society' through this use of new communication medium. According to Mahroum (2011), 'the Arab Second Society' grew on virtual networks, on pal-talks, YouTube videos and social groups across various platforms on the net. Regarding to Van Dijk, new types of society emerge out of this interrelationship of process and the increasing role of media networks what he called network society (cited in Crozier, 2002, p.10) It is a society that thrives on modern and more effective 'mobilisation structures' (Mahroum, 2011).

7.6.2 The Internet's role on online gratifications

The rise of a 'new type of society' (Van Dijk, 1999a, p.23) has occurred through the use of the Internet as a new communications technology, which the current study has identified as having a considerable role in Libyan university students' lives. It has measured and noted the online satisfactions gained by Libyan students in response to online social, cultural and political needs. To understand how and in what way, the majority of the respondents find that they can easily achieve their gratifications on the Internet. The indications of gratification in the current study results are consistent with Ferguson and Perse (2000, pp.155-174), who found four main motivations for Internet use: entertainment, passing the time, relaxation/escape and social information. These social, economic, cultural and political satisfactions are a major aspect of the development of network interactivity on new communications technologies.

7.6.3 Internet role

Significantly, the role the Internet exerts on users through their online social, cultural and political interactivities is increased in this new society and has developed as a result of users also becoming active participants and creators. To understand how and in what way theory framework explained this finding; according to Galtung (1995), information technologies might narrow the gaps between rich and poor, men and women and urban and rural areas. Such changes can be seen in Arab society: 'the societal political transformations that swept the Arab region throughout 2011 have empowered large segments of the population. Many stereotypes have been shattered, with Arab youth; "citizens" and women become the main drivers of regional change' (Mourtada, and Salem, (2012, p.269). The paradigm arising from this "new society" has emerged through Libyan university students' use and experience of the Internet, their satisfaction of their needs and their subsequently increasing awareness of their online interactions and of the process of Internet power that works through them. The role of the Internet can be seen in the participants' daily online map, favourite sites and the elements persuading them to use sites, all of which the participants demonstrated an awareness of. These common subjects – the sites the participants used daily – are part of the 'agenda-setting 1st level' (Rogers and Dearing, 1988). The findings indicated that the content and title of sites persuade

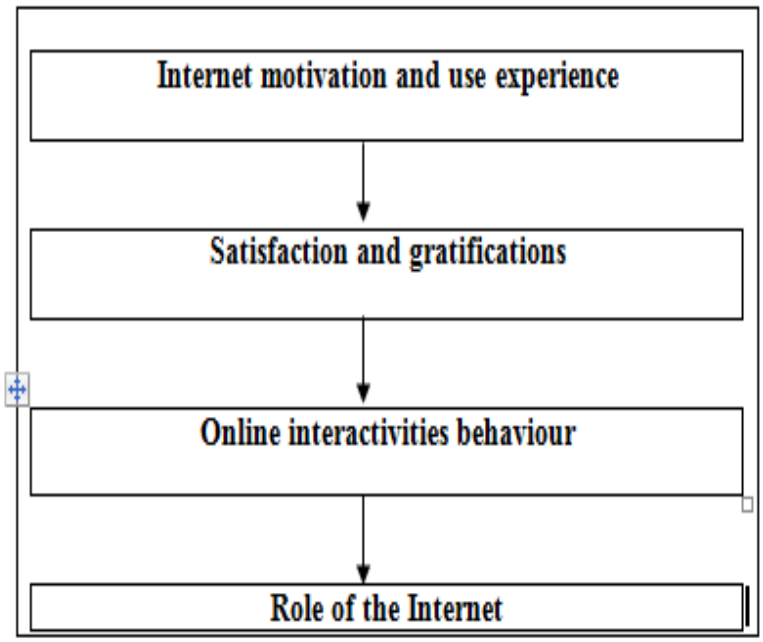
the majority of respondents to browse them, which again shows the users' awareness. This content, and what parts of it are deemed to be important, is part of the 'agenda setting 2nd level' (Rogers and Dearing, 1988). This in turn builds awareness of participant behaviour through 'the existence of favourite sites which the users browse and from which they derive a daily map' (Eugene, 1979, p.101). Therefore, this could be explained through agenda-setting process, whereby the Internet is not only 'telling us what to think about' but also 'how to think about a story' (Cohen, B. 1963, cited in Maxwell E. McCombs, (1992). This could explain the role of the Internet in the lives of Libyan university students and the subsequent rise of a new society which can be seen 'in cultural life, in the public sphere, in culture, in social consciousness, or in the field of social interaction and principles' (Hankiss, 1988, p.22).

7.6.4 Communication and social change

Communication plays a central role in changing and developing individual behaviours and in societal development. Social change refers to change in people's lives as they themselves define it (Gray-Felder and Dean, 1999, p.4-8). Technological theory emphasises the role of technology in social change through science and the direct applications of technologies as tools (Ogbum, 1947). Within the development of technology of Web 2.0 features and online interactivity a new type of society might have emerged in Libya as a result of the role of communication in social change. The responses provided by the sample of Libyan university students in the current study about Internet use, motivation of use, gratifications, and online interactivity details show the relationship between communication and social change, in fact, to understand how and in what way theory framework explained this finding discussed in section 6.3; there is an important relationship between technologies and social changes (Ogbum, 1947). Moreover, 'the media are an important instrument to be used in continuous efforts to improve people's quality of life (Kraidy, 2002, p.5). According to Colin Fraser and Jonathan Villet (1994) 'the planned use of communication technologies, activities and media gives people powerful tools both to experience change and actually to guide it' (cited in UNICCO, 2008, p.14). This could be seen in some ways in the Arab Spring, particularly in the role of young people as noted in chapter 6 and explained by Mahroom's (2011) 'new society' theory. Before the widespread use of the Internet, people had few opportunities to express themselves, share information or interact with other people and cultures freely, and 'people who do not talk about political issues are more subject to agenda-setting influence because they depend more heavily on media content than those who receive information from other sources, including their colleagues and friends' (Erbring, Goldenberg and Miller, 1980, p.16-49). The findings indicate the significant role of the Internet in Libyan society, and, indeed, the Arab second society grew on virtual networks, pal-talks, YouTube videos and social groups across various platforms on the net and thrives on modern and more effective 'mobilisation structures' (Mahroum, 2011).

Figure 7-1 shows the direction of the Internet's impact on the lives of young Libyan users.

Table 7-1: The Internet's role in participants' lives



7.6.5 Users as participants rather than audience members

The role of the Internet in the participants' lives grew stronger as they engaged in more online interactive behaviour and used the Internet more. Castells (2007) pointed out that the variety of social software and tools have provoked the development of interactive communications networks and noted the importance of interactivity, which was also emphasised by Van Dijk (2006a, p.9) who called it 'behavioural interactivity'. To understand how and in what way, the study discussion of online interactivity (see section 7.3 through 7.5) showed that online interactive behaviour of those Libyan university students supports and extend Rafael (1988) who noted: there are different processes which define interactive communication; human interactivity, interactivity through computers or any new communication technologies and online human behaviour. Its conceptualisation is based on an anthropomorphic definition which detects and reacts to human behaviour such as physical movement, body language or changes in mental states, and is called interactive. Therefore features in the context of social media have played an important role in developing users into active participants who can listen to, watch, write, send, receive and publish information freely: 'web and mobile-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content' (Kietzmann et al., 2011, p.241).

7.6.6 Similar opportunity for university students

The similarity of level of education, rates of enrolment (see Table 2-2, section 2.2.6) and age of male and female Libyan university students might allow them to have the same opportunity to use the

Internet. These demographic factors might give them similar levels of ability and experience – what Van Dijk and Hacker (2003, p.315) termed 'mental access' – and thus bridge digital divide. This equality of opportunity better allows online social, cultural and political interactivity to guide the development of a "new type of society" (Van Dijk, 1999a, p.23, Mahroum, 2011). According to Hankess (1988, p.15), the distinction between the first and the second society is not between two distinct groups of people but between two dimensions of social existence which are governed by two different sets of organisational principles. Above all, the Internet gives users features that allow them to be proactive in their media use. This gives student users, as creators, the same opportunity and power of action as was previously held by major mass media organisations (Mourtada, and Salem, 2012, p.269). This development is noted in this study in the similarly of online behaviour and opportunity between men and women in universities in both urban and rural areas as discussed above in 10.5/10.6. In the first society, traditional Arab and Islamic social cultural conditions prevailed, leading to gender inequality that, according to Elsafty, M., (2005), was largely biased to the advantage of males. According to Mourtada and Salem (2012, p.274) social media use in the Arab region has empowered women and youth and will continue to do so in the future.

This study confirms the role of the media, which works through the same mechanisms but now offers multiple interactive online features. Wherever there is an Internet connection, participants now have the opportunity to affect their individual, local and potentially national social and cultural conditions. As a result, Mahroum, (2011) argued that 'the great Arab revolution that we are witnessing today is the first real revolution that is the work generation as they are known in the West, a generation that grew up digital. Generation revolutionaries are unique in that they do not draw on charismatic leaders to mobilise, nor are they in need of a strong command structure to organise'. Meige contrasted the 'Mondes vecus' (the 'world life') with 'L'éspace social global' in order to evaluate the new world social order, and this contrast can explain the findings of this study regarding equality of opportunity: 'Les techniques de communication, donnent la possibilite d'áctiver les changements sociaux' ('the new communication technologies offer the possibility of enabling social change') (Miege, 1997, p.140).

7.6.7 The Internet and the rise of the new society

To sum up discussion so far, the study suggests that a "new society" may have arisen in part due to the role of the Internet as a new communications opportunity. To understand how and in what way, this is a 'new type of society' in which social relations are organised within mediating technologies that form a communication network rather than by networks typified by face-to-face social relations (Van Dijk, 2012). People are perpetually becoming more linked to one another, and they will have more opportunities to access information and to communicate (Van Dijk, 1999). According to Hankiss (1988, p.15), 'the interaction and processes in this society are organised and governed by various configurations of organisational principle, and we propose to call these configurations

paradigms'. In the social experience of Libyan university students, this can be in part attributed to the role of the Internet as an important factor that has led Libyan society into the information age, in line with Castells' (2007) idea that societies are passing from the industrial age into the information age (see also 2000a, 2000b). In addition, the role of the Internet and online interactions in university society have helped to bridge gender gap and 'empower women' in some ways (Mourtada and Salem, 2012, p.274), as well as give opportunities to those who live away from the main urban centres. Thus a new society has emerged where the social, cultural and political conditions all feature interactivity. Moreover, Internet users are now also creators who are also part of the equation of influence. Consequently, as discussed in chapter 4, due to the relationship between communication and social change, the social, cultural and political online interactivities of Libyan university students have helped to lead to the emergence of a 'new type of society' (Van Dijk, 1999a, p.23, Mahroum, 2011) through their ability to obtain information and join the online network society. According to Backer (2001), behaviour is more likely to change if the person forms a strong positive intention, or makes a commitment, to perform the behaviour. These behaviours are influenced by the online interactivities which have been identified by this study, including reading, writing, posting comments, watching and listening and expressing opinion freely. According to Dinnis et al., (2010, p.386) the new society 'is often presented as a revolutionary way of gathering, organising and sharing of information'. Moreover, virtual communication networks for 'banking, dating, chatting, and sharing interests' are developing and growing gradually in the virtual world (Dinnis et al., 2010, p.386).

Finally, changes are taking place in the virtual world, and the new network society has emerged due to participants' online behaviour, which is becoming more practical due to the new Internet, which is now based more on social media. The Internet now plays an accepted and important role in the development of society, as was shown during the Arab Spring, which can be considered a real example of the role of the Internet in young people's lives (Stepanova, 2010, Allagui and Kuebler, 2011, Arab Social Media Report, 2012). The Internet opens the doors of closed regimes (Philip, 2011), liberates culture (Fauad, 2009) and helps to construct public opinion (Zoda, 2011), especially with the rise of social media (the new Internet Web 2.0). This last process also played an important role in the Arab Spring (Al-Raood, 2012), when 'social media created the opportunity for citizens, journalists and elites to get their voices heard which may lead to the retreat of the state gatekeeper as a control and the rise of interactivity among an ever-wider number of Internet users' (Arab Social Media Report, 2012, Ali and Fahmy, 2013). The changes happening in Libyan university society and the rise of the new society can be seen in 'the great Arab revolution that we are witnessing today', which 'is the first real revolution that is the work generation as they are known in the West, a generation that grew up digital. Generation revolutionaries are unique in that they do not draw on charismatic leaders to mobilise, nor are they in need of strong command structure to organise' (Mahroum, 2011).

The main conclusions of this study are that the Internet has influenced Libyan university student lives and that society is moving towards the global village at the time of information age as noted by (McLuhan, 1964, p.63). This is moving toward and consists with the 'new type of society' as noted by (Van Dijk, 1999a, p. 23) and moving toward 'new Arab society' as noted by Mahroum, 2011, with high levels of online interactive users. Social, cultural and political factors are the main subjects of online interactivities. However, there are still few differences in Internet usage between men and women and between rural and urban areas because socio-culture dimension in Arab society in some way still playing a role in digital divide.

7.7 Research reflection and limitations

This research was limited to the new communication sector in Libyan universities; in order to gain a more comprehensive picture of the role of the Internet in people's lives, therefore, any future study should be conducted into its role in other sectors of society. This research aimed to examine the use of the Internet to determine the relationship between the Internet and social change as an illustration of the role of the Internet in young people's lives. This study used a mixed methodology that included a quantitative tool as the main instrument, supplemented by a complementary qualitative instrument. In this way the quantitative data was supported by interviews and thematic analysis. These methods were adequate for this type of study. However, there are a number of limitations to this research that need to be considered, because they could form the basis of future studies.

First, the study was conducted during the civil war in Libya, which created a dangerous situation and made it difficult to travel or conduct street research. As a result, it was decided that an academic setting would be the most appropriate for this research, Tripoli and Azzawya universities were both the best and the only choice (see sections 1.4 / 2.2.9 and 2.2.10).

Second, the study participants were drawn from Libyan university students from Tripoli University in the capital city as representatives of an urban area and from Azzawya University and seven other towns as representatives of a rural area. Therefore, the study's generalisability is limited to the sample demographics from both Tripoli and Azzawya Universities, representing young Libyan people aged between 18 and 26 who study at universities, although the sampling frame did seek to achieve a diverse sample from within this population.

Third, this study's sample size of 861 was adequate to complete a study evaluation of the role of the Internet in the lives of university students and to provide a complete picture regarding the research aims and objectives. However, larger numbers of participants are preferred for social science research, and this study would be more representative if it investigated samples from other Libyan regions in order to provide a wider comparison. Due to the Libyan civil war, the study population was limited to students from these two universities.

Fourth, the study questionnaires were designed to report the Libyan university students' patterns of Internet use, and measure their use, gratification and online interactions regarding the aims and study objectives. It was deemed appropriate for this research to support the main method, the survey, with a thematic analysis and interviews with the parents of young Libyans and with media experts. These were complementary and designed to give a broader understanding of young Libyans' use of the Internet. A next step might be to explore these issues further though in-depth qualitative methods. Such an approach was not possible given the social and political conditions in Libya during the research.

Fifth, the study was able to look deeply at the impact of the Internet on society using self-reported data, which was obtained through questionnaires, which helped to build the framework of this study. The instrument was piloted to ensure that the questions worked as desired. Self-reporting measures are in general less accurate than direct measurement of media use, such as media research user and audience monitoring systems and apps, though such techniques are not available within Libya at present.

Sixth, this study aimed to investigate the role of the Internet in the lives of young Libyans. As we have seen, the Internet has had a real impact on participants' lives as new communications technologies have allowed users to become active participants. This, in Libya, is an important change in social, cultural and political behaviour. Therefore, this research could have taken this aspect into greater consideration and asked whether there have been any wider, unforeseen positive or negative impacts of the Internet on Libyan society.

Seventh, it appeared that the surveyed student's perceived Internet use to be an important daily behaviour, but this might not be their only daily behaviour. There may be other forms of media which influence their behaviour and form an element of change, but in this research, the Internet is seen to be a crucial element in the field of the relationship between communication and social change. It may have been useful to ask the students about their pattern of Internet use alongside their other forms of interactivity, and then measure the impact of this combined behaviour, rather than simply investigating the rate of Internet use.

7.8 Contributions

This research has contributed by providing significant new data about Internet use and its role in Libyan university students' lives, in a country where prior research on this issue has been sparse. This study came in an important period when Internet use has developed and the situation in the subject country has dramatically changed, especially since 2011. The Internet has been introduced more and more around the country and people have had the opportunity to engage with a global, networked society. This is a dramatic change in their ability to communicate without control or censorship, and it

has impacted on people's lives and changed them through online awareness and behaviour that might have played an important role in some ways during the Arabic Spring in Libya.

The literature survey in chapters eight and nine revealed many gaps in the current state of knowledge and understanding of the role of the Internet in university students' lives and of the emergence of a new society. The present study attempts to reduce this gap by conducting an empirical examination of the role of the Internet in society. The development of our understanding of the role of the Internet will contribute significantly to the study of the role of the new media and especially the Internet in the development of society. A number of previous studies noted that users are more and more engaged with the Internet and there has been a significant improvement in people's opportunities to access it. Moreover, the literature reveals that the Internet now plays a significant role in empowering society by allowing its users to be participants in online social, cultural and political interactions when they are gratifying their needs. This study is important because it helps to understand the role of the Internet in developing countries, in this case Libya. This study also makes a contribution to the understanding of the role of technology in social change and of the Internet use in Libyan society, as well as of the needs gratified through online activity. It provides a clear picture of the impact of the Internet on the circumstances and social, cultural and political development of Libyan society. Most importantly, it revealed the similarity between men and women in using the Internet, a significant development in a traditional Arab society. Moreover, few differences were identified in Internet use and online interactivities between young Libyan people living in both urban and rural areas. This lack of difference provides an understanding of how the Internet acts as an impetus for social change, which is derived from its social, cultural and political content, which establishes an atmosphere of social change among its users. Furthermore, this study is important for political aspects of the use of the Internet being a means of liberation making those young people free to express their political opinion. Also, they have the ability to communicate with each other or other broad people and exchange ideas, information, photos, articles and share what they want. Moreover, the Internet is a tool of liberation, for freedom of expression, access to an opinion and has new information. Therefore, it develops their political life as they can write and exchange; share their opinion or any political information. This is an important fact in the Libyan rural area as well as the in the urban area for both men and women; it is dramatically developing and changing the process of traditional society which is being invaded by the new communication technologies.

It also illustrates the changes occurring in this society and the extent to which new communications technologies, especially the Internet, may help to improve and develop a society and country. Particularly, this study developed an understanding of the role played by the Internet in the Arab world and in Libyan society.

7.9 Recommendations for further research

This research represents an understanding of the role of the Internet in university students' lives in Libya. The limitations discussed above suggest ways to build on the results of this study in order to extend the scope of this research and thereby provide a richer understanding of the impact of the Internet on developing societies. Further research could be conducted to investigate, test and analyse the influence of the Internet on different sectors in society and different institutions and organisations, such as within the education system, media environment, and commercial departments, in order to measure the influence of new communications technologies on developed and developing countries. Such future studies would give a better understanding of the relationship between the Internet and progress and development through the establishment of different means of communication and their role in society. Gender is another area that would be interesting to investigate further, in order to compare patterns in different societies around the world. It may be interesting to compare the number of women who feel comfortable participating actively online, compared to those who would feel able to participate in person in street demonstrations or elections.

7.10 Conclusion

This chapter has discussed the findings of this thesis in relation to the study questions and the topics developed to investigate the role of the Internet in Libyan university students' lives and the relation between Internet use and emergence of a new society in Libya as a part of the global village in the information age. The study objectives were:

- To understand the surveyed university students' use of the Internet and describe any differences between urban and rural areas and between the genders. This description examines use experience, including computer ownership, use rate, time spent online and place of connection, and it seeks to examine any difficulties arising from or obstacles to Internet use.
- To ascertain the respondents' purposes and motivations for using the Internet and the social, cultural, and political needs satisfied online, and to describe any differences between urban and rural areas and between the genders.
- To examine whether users' online interactivity anticipates social, cultural and political impacts on society through the Internet's influence on young people's lives. Also, to explore users' awareness and the elements that persuades them to browse Internet sites.
- To explore the argument that the Internet has influence on society through users' online interactivities, to assess users' online interactions with Internet content and to measure users' opinions and feelings about the Internet in order to know the extent to which they are happy with the Internet and to what extent the Internet influences lives.

- To combine the results to provide a full picture of university students' use of the Internet and consider its potential role in the development society. Also to combine the results to examine the extent to which a new society can be said to have arisen in Libya.

This study has explored in detail the current state of Internet use among Libyan university students aged between 18 and 26, particularly regarding the role of the Internet in their lives, by identifying the impact of the variables of gender and area of residence on this activity. The study has collected and analysed data which explains the role of the Internet in university students' lives by measuring Internet use, gratifications, online interactions, online behaviour, and users' opinions and feelings about the Internet. It thereby provided evidence as to how the Internet is playing role in participants' lives and society. It sought to define the link between social change and online communication and establish which elements and factors lead to the emergence of a 'new society'.

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Appendix A: Tables

This is data analysis details of Likert scales data tables which organised as it inalysed in chapter 5 &6 and regarding to survey questions (see appendix B, p, 337-349).

Section B: Purposes of Internet use and gratifications achieved

S Q 10: For which purposes and gratifications do you use the Internet?

10.1. Social purposes and gratification of using the Internet:

To make contact with online friends					
All samples/					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men		1.2	5.6	45.2	48.0
Women		0.6	5.8	40.5	53.1
Overall		*0.9*	*5.7*	*42.5*	*50.9*
Urban samples / Tripoli University					
Men		1.1	4.4	46.4	48.1
Women		0.0	6.8	39.2	54.0
Overall		*0.4*	*5.8*	*42.2*	*51.6*
Rural samples/ Azzawya university					
Men		1.4	9.0	41.8	47.8
Women		3.3	1.6	45.9	49.2
Overall		*2.3*	*5.5*	*43.8*	*48.4*

To override social monitoring					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	8.1	20.2	29.0	25.4	17.3
Women	5.5	14.4	28.5	33.7	17.8
Overall	6.6	16.9	28.7	30.1	17.6
Urban samples / Tripoli University					
Men	8.3	18.2	33.1	22.7	17.7
Women	5.3	13.6	31.1	34.5	15.5
Overall	6.5	15.5	31.9	29.7	16.4
Rural samples / Azzawya university					
Men	7.5	25.4	17.9	32.8	16.4
Women	6.5	17.7	17.7	30.6	27.4
Overall	7.0	21.7	17.8	31.8	21.7

To share and discuss information with groups of friends:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	0.0	4.0	11.7	46.6	37.7
Women	0.6	2.5	8.9	48.8	39.3
Overall	0.3	3.1	10.1	47.8	38.6
Urban samples / Tripoli University					
Men	0.0	3.9	13.3	45.9	37.0
Women	0.8	2.3	8.3	48.9	39.8
Overall	0.4	2.9	10.3	47.6	38.7
Rural samples / Azzawya university					
Men		4.5	7.6	48.5	39.4
Women		3.2	11.3	48.4	37.1
Overall		3.9	9.4	48.4	38.3

10.2. Cultural purposes and gratification of using the Internet:

To have new information					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	4.5	6.1	23.5	38.1	27.9
Women	1.5	5.1	21.4	35.8	36.1
Overall	2.8	5.5	22.3	36.8	32.6
Urban samples / Tripoli University					
Men	3.3	3.9	25.0	38.3	29.4
Women	1.9	5.2	20.0	35.6	37.4
Overall	2.4	4.7	22.0	36.7	34.2
Rural samples / Azzawya university					
Men	7.5	11.9	19.4	37.3	23.9
Women	0.0	4.8	27.4	37.1	30.6
Overall	3.9	8.5	23.3	37.2	27.1

To have information about other cultures which users want					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.6	0.8	5.6	53.6	38.3
Women	0.3	1.8	7.3	50.90%	39.7
Overall	0.9	1.4	6.6	52.1	39.1
Urban samples / Tripoli University					
Men	1.7	0.6	5.0	53.6	39.2
Women	0.4	1.5	8.2	50.7	39.
Overall	0.9	1.1	6.9	51.9	39.2
Rural samples / Azzawya university					
Men	1.5	1.5	7.5	53.7	35.8
Women	0.0	3.2	3.2	51.6	41.9
Overall	0.8	2.3	5.4	52.7	38.8

To have ideas about lifestyles in other countries:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	0.4	2.8	7.3	43.1	46.3
Women	0.3	2.4	6.1	45.0	46.2
Overall	0.3	2.6	6.6	44.2	46.2
Urban samples / Tripoli University					
Men	0.6	2.2	6.1	43.6	47.5
Women	0.4	2.3	6.0	46.0	45.3
Men/Women	0.5	2.3	6.1	45.0	46.2
Rural samples / Azzawya university					
Men		4.5	10.4	41.8	43.3
Women		3.2	6.5	40.3	50.0
Overall		3.9	8.5	41.1	46.5

For entertainment					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	3.3	7.8	28.2	43.3	17.6
Women	3.4	8.0	27.0	41.4	20.2
Overall	3.3	7.9	27.5	42.2	19.1
Urban samples / Tripoli University					
Men	3.9	6.7	28.7	42.1	18.5
Women	3.8	8.3	26.0	39.2	22.6
Overall	3.8	7.7	27.1	40.4	21.0
Rural samples / Azzawya university					
Men	1.5	10.4	26.9	46.3	14.9
Women	1.6	6.6	31.1	50.8	9.8
Overall	1.6	8.6	28.9	48.4	12.5

10.3. Political purposes and gratification of using the Internet

To express my opinions about various issues					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.6	2.0	16.6	51.8	27.9
Women	0.9	2.1	15.2	54.9	26.8
Overall	1.2	2.1	15.8	53.6	27.3
Urban samples / Tripoli University					
Men	1.70	1.7	17.2	52.2	27.2
Women	0.80	2.3	16.5	54.9	25.6
Overall	1.1	2.0	16.8	53.8	26.2
Rural samples / Azzawya university					
Men	1.5	3.0	14.9	50.7	29.9
Women	1.6	1.6	9.7	54.8	32.3
Overall	1.6	2.3	12.4	52.7	31.0

For political news:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.6	4.9	21.2	46.1	26.1
Women	0.9	4.6	19.4	48.9	26.2
Overall	1.2	4.7	20.2	47.7	26.1
Urban samples / Tripoli University					
Men	1.7	5.6	18.4	48.6	25.7
Women	0.8	5.3	21.6	45.5	26.9
Overall	1.1	5.4	20.3	46.7	26.4
Rural samples / Azzawya university					
Men	1.5	3.0	28.8	39.4	27.3
Women	1.6	1.6	9.8	63.9	23.0
Overall	1.6	2.4	19.7	51.2	25.2

To find political information from around the world					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.6	1.6	17.9	52.0	26.8
Women	0.0	3.7	13.3	53.3	29.7
Overall	0.7	2.8	15.3	52.7	28.5
Urban samples / Tripoli University					
Men	2.2	1.1	18.9	51.7	26.1
Women	0.0	3.1	13.4	55.3	28.2
Overall	0.9	2.3	15.6	53.8	27.4
Rural samples / Azzawya university					
Men		3.0	15.2	53.0	28.8
Women		6.6	13.1	44.3	36.1
Overall		4.7	14.2	48.8	32.3

10.4. Other purposes and gratification satisfied through use of the Internet

For studying					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	4.1	3.7	13.4	44.3	34.6
Women	1.2	5.8	12.9	48.5	31.6
Overall	2.4	4.9	13.1	46.7	32.9
Urban samples / Tripoli University					
Men	3.9	3.9	11.2	44.1	36.9
Women	1.5	5.3	13.6	48.9	30.7
Overall	2.5	4.7	12.6	47.0	33.2
Rural samples / Azzawya university					
Men	4.5	3.0	19.4	44.8	28.4
Women	0.0	8.1	9.7	46.8	35.5
Overall	2.3	5.4	14.7	45.7	31.8

To be relaxed and enjoy my time:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.4	6.5	34.6	30.5	26.0
Women	2.8	4.6	32.7	30.6	29.3
Overall	2.6	5.4	33.5	30.5	27.9
Urban samples / Tripoli University					
Men	2.2	6.1	38.9	27.8	25.0
Women	2.3	5.7	33.8	28.9	29.3
Overall	2.3	5.9	35.9	28.4	27.5
Rural samples / Azzawya university					
Men	3.0	7.6	22.7	37.9	28.8
Women	4.9	0.0	27.9	37.7	29.5
Overall	3.9	3.9	25.2	37.8	29.1

Section C: anticipation social, cultural and political impact of the Internet

S Q 11: <u>For which online interactivities do you use the Internet?</u>

11.1. Social online interactivities:

Chatting with friends:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.2	1.2	2.0	51.0	44.6
Women	1.5	1.5	2.6	49.3	45.2
Overall	1.3	1.3	2.4	50.0	44.9
Urban samples / Tripoli University					
Men	0.5	0.0	1.6	54.9	42.9
Women	1.4	1.4	2.8	49.1	45.2
Overall	1.1	0.9	2.4	51.4	44.3
Rural samples / Azzawya university					
Men	3.0	4.5	3.0	40.3	49.3
Women	1.6	1.6	1.6	50.0	45.2
Overall	2.3	3.1	2.3	45.0	47.3

To escape from society pressures/ family and society control:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	15.9	20.3	20.3	22.3	21.1
Women	9.9	21.0	24.2	30.0	14.9
Overall	12.5	20.7	22.6	26.8	17.5
Urban samples / Tripoli University					
Men	14.1	20.1	23.4	23.4	19.0
Women	9.6	21.0	26.7	28.1	14.6
Overall	11.4	20.6	25.4	26.2	16.3
Rural samples / Azzawya university					
Men	20.9	20.9	11.9	19.4	26.9
Women	11.3	21.0	12.9	38.7	16.1
Overall	16.3	20.9	12.4	28.7	21.7

11.2. Cultural online interactivities

For leisure, entertainment music, song and playing games					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	6.0	15.5	8.0	53.4	20.5
Women	6.6	12.5	8.8	53.1	19.1
Overall	6.6	12.5	8.8	53.1	19.1
Urban samples / Tripoli University					
Men	5.4	13.0	9.2	55.4	16.8
Women	7.1	9.6	10.0	52.1	21.1
Overall	6.5	11.0	9.7	53.4	19.4
Rural samples / Azzawya university					
Men	7.5	22.4	4.5	47.8	17.9
Women	6.5	12.9	6.5	56.5	17.7
Overall	7.0	17.8	5.4	51.9	17.8

To gain knowledge about other cultures:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.2	2.4	8.8	54.6	33.1
Women	1.5	3.5	8.5	55.1	31.5
Overall	1.3	3.0	8.6	54.9	32.2
Urban samples / Tripoli University					
Men	1.6	2.7	10.3	53.2	32.1
Women	1.8	3.2	9.6	56.2	29.2
Overall	1.7	3.0	9.9	55.1	30.3
Rural samples / Azzawya university					
Men		1.5	4.5	58.2	35.8
Women		4.8	3.2	50.0	41.9
Overall		3.1	3.9	54.3	38.8

To find answers to any questions:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.0	0.0	2.4	50.8	44.8
Women	1.5	1.5	1.2	53.1	42.9
Overall	1.7	0.8	1.7	52.1	43.7
Urban samples / Tripoli University					
Men	2.7	0.0	2.7	47.3	47.3
Women	1.8	1.8	1.1	52.7	42.7
Overall	2.2	1.1	1.7	50.5	44.5
Rural samples / Azzawya university					
Men	-	-	1.5	60.6	37.9
Women	-	-	1.6	54.8	43.5
Overall	-	-	1.6	57.8	40.5

11.3. Political online interactivities

To enjoy more freedom of speech, and express my opinions					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	3.6	5.2	10.8	41.4	39.0
Women	1.7	4.4	12.5	46.4	35.0
Overall	2.5	4.7	11.8	44.3	36.7
Urban samples / Tripoli University					
Men	3.3	4.3	12.5	44.6	35.3
Women	1.4	4.6	12.5	47.7	33.8
Overall	2.2	4.5	12.5	46.5	34.4
Rural samples / Azzawya university					
Men	4.5	7.5	6.0	32.8	49.3
Women	3.2	3.2	12.9	40.3	40.3
Overall	3.9	5.4	9.3	36.4	45.0

To receive news about the world					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.6	1.2	1.6	57.4	38.2
Women	1.5	0.9	5.5	56.0	56.4
Overall	1.5	1.0	3.9	56.6	37.0
Urban samples / Tripoli University					
Men	1.6	0.5	2.2	56.0	39.7
Women	1.1	1.1	6.4	56.6	34.9
Overall	1.3	0.9	4.7	56.3	36.8
Rural samples / Azzawya university					
Men	1.5	3.0	0.0	61.2	34.3
Women	3.2	0.0	1.6	53.2	41.9
Overall	2.3	1.6	0.8	57.4	38.0

To follow local and international news:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	3.2	4.5	7.2	51.8	33.1
Women	1.7	6.1	12.0	47.5	32.7
Overall	2.4	5.6	9.9	49.3	32.8
Urban samples / Tripoli University					
Men	2.7	4.3	6.0	54.3	32.6
Women	2.1	6.4	12.5	47.2	31.7
Overall	2.4	5.6	9.9	50.1	32.0
Rural samples / Azzawya university					
Men	4.5	6.0	10.4	44.8	34.3
Women	0.0	4.8	9.7	48.4	37.1
Overall	2.3	5.4	10.1	46.5	35.7

11.4. Personal online interactivities:

To help me do my homework:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	5.6	8.8	8.8	42.6	34.3
Women	4.7	10.5	11.1	50.1	23.6
Overall	5.1	9.8	10.1	47.0	28.1
Urban samples / Tripoli University					
Men	4.9	9.8	8.7	39.7	37.0
Women	5.3	10.7	11.0	49.5	23.5
Overall	5.2	10.3	10.1	45.6	28.8
Rural samples / Azzawya university					
Men	7.5	6.0	9.0	50.7	26.9
Women	1.6	9.7	11.3	53.2	24.2
Overall	4.7	7.8	10.1	51.9	25.6

For my personal needs					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.8	6.8	13.5	57.8	19.1
Women	2.9	7.0	14.6	52.8	22.7
Overall	2.9	6.9	14.1	54.9	21.2
Urban samples / Tripoli University					
Men	2.7	8.7	14.7	54.3	19.6
Women	3.2	6.8	14.6	53.7	21.7
Overall	3.0	7.5	14.6	54.0	20.9
Rural samples / Azzawya university					
Men	3.0	1.5	10.4	67.2	17.9
Women	1.6	8.1	14.5	48.4	27.4
Overall	2.3	4.7	12.4	58.1	22.5

Q 15: To what extent are the following used?

15.1. Websites which users browse everyday

E-mails:					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	35.7	28.9	12.9	11.2	11.2
Women	38.6	32.0	12.2	9.5	7.7
Overall	37.4	30.7	12.5	10.2	9.2
Urban samples / Tripoli University					
Men	32.4	29.1	15.4	13.2	9.9
Women	38.4	32.2	12.0	10.1	7.2
Overall	36.0	31.0	13.3	11.4	8.3
Rural samples / Azzawya university					
Men	44.8	28.4	6.0	6.0	14.9
Women	39.3	31.1	13.1	6.6	9.8
Overall	42.2	29.7	9.4	6.3	12.5

Messenger - Skype					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	13.7	20.9	10.4	26.5	28.5
Women	17.2	23.1	16.3	20.4	23.1
Overall	15.7	22.1	13.8	23.0	25.4
Urban samples / Tripoli University					
Men	11.5	22.0	12.6	26.4	27.5
Women	16.2	24.9	16.6	19.9	22.4
Overall	14.4	23.7	15.0	22.4	24.4
Rural samples / Azzawya university					
Men	19.4	17.9	4.5	26.9	31.3
Women	21.3	14.8	14.8	23.0	26.2
Overall	20.3	16.4	9.4	25.0	28.9

YouTube					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	17.2	27.6	18.8	22.4	14.0
Women	23.8	29.0	23.8	12.3	11.1
Overall	21.0	28.4	21.7	16.6	12.4
Urban samples / Tripoli University					
Men	15.8	27.9	19.7	24.0	12.6
Women	26.8	29.6	20.4	13.2	10.0
Overall	22.5	28.9	20.1	17.5	11.0
Rural samples / Azzawya university					
Men	20.9%	26.9%	16.4%	17.9	17.9
Women	9.8%	26.2%	39.3%	8.20	16.4
Overall	15.6	26.6	27.3	13.3	17.2

Facebook					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	75.2	10.8	5.2	5.2	3.6
Women	77.1	9.1	4.4	2.6	6.7
Overall	76.3	9.8	4.7	3.7	5.4
Urban samples / Tripoli University					
Men	76.5%	10.9%	3.8%	4.9%	3.8%
Women	77.9%	8.6%	3.9%	2.9%	6.8%
Overall	77.3%	9.5%	3.9%	3.7%	5.6%
Rural samples / Azzawya university					
Men	71.6	10.4	9.0	6.0	3.0
Women	73.8	11.5	6.6	1.6	6.6
Overall	72.7	10.9	7.8	3.9	4.7

Academic websites					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	46.3	30.1	9.3	9.3	4.9
Women	34.8	31.9	18.3	8.8	6.2
Overall	39.7	31.1	14.5	9.1	5.6
Urban samples / Tripoli University					
Men	45.8	30.7	8.9	8.4	6.1
Women	34.2	31.3	17.6	10.4	6.5
Overall	38.7	31.1	14.2	9.6	6.3
Rural samples / Azzawya university					
Men	47.8	28.4	10.4	11.9	1.5
Women	37.7	34.4	21.3	1.6	4.9
Overall	43.0	31.3	15.6	7.0	3.1

Google					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	75.2	15.6	6.0	1.2	2.0
Women	77.8	10.9	6.8	2.4	2.1
Overall	76.7	12.9	6.5	1.9	2.0
Urban samples / Tripoli University					
Men	76.0	15.8	3.8	1.6	2.7
Women	79.9	9.7	6.1	2.5	1.8
Overall	78.3	12.1	5.2	2.2	2.2
Rural samples / Azzawya university					
Men	73.1	14.9	11.9	0.0	0.0
Women	68.3	16.7	10.0	1.7	3.3
Overall	70.9	15.7	11.0	0.8	1.6

Commercial and shopping sites					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	11.3	14.9	12.1	23.8	37.5
Women	13.8	20.3	14.1	19.4	32.4
Overall	12.8	18.0	13.3	21.3	34.5
Urban samples / Tripoli University					
Men	8.8	15.5	12.7	22.7	39.8
Women	14.0	22.2	14.3	19.0	30.5
Overall	12.0	19.6	13.7	20.4	34.1
Rural samples / Azzawya university					
Men	17.9	13.4	10.4	26.9	31.3
Women	13.1	11.5	13.1	21.3	41.0
Overall	15.6	12.5	11.7	24.2	35.9

International and Libyan news sites?					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	35.8	19.9	16.7	14.2	12.6
Women	37.6	26.8	12.1	14.4	9.1
Overall	36.9	23.9	14.0	14.3	10.6
Urban samples / Tripoli University					
Men	30.7	18.4	18.4	16.2	15.1
Women	36.9	25.4	12.9	15.1	9.7
Overall	34.5	22.7	15.1	15.5	11.8
Rural samples / Azzawya university					
Men	49.3	23.9	11.9	9.0	6.0
Women	45.3	28.1	10.2	10.2	6.3
Overall	45.3	28.1	10.2	10.2	6.3

Sport news, music and songs websites					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	24.5	25.3	17.6	17.1	15.5
Women	27.6	30.0	19.9	13.6	8.9
Overall	26.3	28.0	18.9	15.1	11.7
Urban samples / Tripoli University					
Men	21.2	25.1	17.3	20.1	16.2
Women	29.6	26.7	20.2	15.2	8.3
Overall	26.3	26.1	19.1	17.1	11.4
Rural samples / Azzawya university					
Men	33.3	25.8	18.2	9.1	13.6
Women	18.3	45.0	18.3	6.7	11.7
Overall	26.2	34.9	18.3	7.9	12.7

Personal need sites					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	13.1	12.7	17.1	15.9	41.2
Women	12.7	19.6	17.5	23.3	26.9
Overall	12.8	16.7	17.4	20.1	33.0
Urban samples / Tripoli University					
Men	12.4	10.7	18.0	15.7	43.3
Women	12.2	19.3	19.3	23.3	25.9
Overall	12.3	15.8	18.8	20.3	32.8
Rural samples / Azzawya university					
Men	14.9	17.9	14.9	16.4	35.8
Women	14.8	21.3	9.8	23.0	31.1
Overall	14.8	19.5	12.5	19.5	33.6

Twitter					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	1.6	6.9	20.6	47.4	23.5
Women	2.2	7.7	22.4	46.2	21.5
Overall	1.9	7.3	21.7	46.7	22.4
Urban samples / Tripoli University					
Men	3.5	4.8	22.8	46.1	22.8
Women	1.5	8.0	23.2	46.4	20.9
Overall	4.3	5.9	21.8	46.3	21.7
Rural samples / Azzawya university					
Men	0.3	6.0	17.6	50.7	25.4
Women	4.8	4.8	21.0	45.2	24.2
Overall	3.9	6.2	17.0	48.1	24.8

Section D: online interactivities behaviour and potential development of a 'New Society'

S Q 16: How do you interact with the Internet?

By writing comments on social media pages					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	16.5	28.2	33.9	17.7	3.6
Women	15.8	22.7	44.1	12.1	5.3
Overall	16.1	25.1	39.6	14.6	4.6
Urban samples / Tripoli University					
Men	15.5	27.1	36.5	17.7	3.3
Women	14.5	25.2	43.5	11.8	5.0
Overall	14.9	26.0	40.6	14.2	4.3
Rural samples / Azzawya university					
Men	19.4	31.3	26.9	17.9	4.5
Women	21.7	11.7	46.7	13.3	6.7
Overall	20.5	22.0	36.2	15.7	5.5

By saving articles or printing them out:					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	12.4	18.3	39.0	16.	13.7
Women	6.9%	17.8%	40%	20.3%	15.0
Overall	9.3	18.0	39.6	18.7	14.4
Urban samples / Tripoli University					
Men	13.7	16.0	40.6	16.0	13.7
Women	6.5	18.5	39.6	21.5	13.8
Overall	9.4	17.5	40.0	19.3	13.8
Rural samples / Azzawya university					
Men	9.1	24.2	34.8	18.2	13.6
Women	8.3	15.0	41.7	15.0	20.0
Overall	8.7	19.8	38.1	16.7	16.7

By reading longer articles:					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	26.7	26.3	35.2	9.7	2.0
Women	20.4	32.7	33.3	8.2	5.3
Overall	23.2	29.9	34.2	8.8	3.9
Urban samples / Tripoli University					
Men	27.2	26.7	35.0	9.4	1.7
Women	18.6	35.7	33.3	7.4	5.0
Overall	22.1	32.0	34.0	8.2	3.7
Rural samples / Azzawya university					
Men	25.4	25.4	35.8	10.4	3.0
Women	28.3	20.0	33.3	11.7	6.7
Overall	26.8	22.8	34.6	11.0	4.7

By watching videos:					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	8.9	23.0	37.9	20.6	9.7
Women	15.3	19.9	35.5	19.0	10.3
Overall	12.5	21.3	36.6	19.7	10.0
Urban samples / Tripoli University					
Men	7.2	22.7	40.9	19.9	9.4
Women	15.7	21.5	34.9	18.0	10.0
Overall	12.2	21.9	37.3	18.8	9.7
Rural samples / Azzawya university					
Men	13.4	23.9	29.9	22.4	10.4
Women	13.3	13.3	38.3	23.3	11.7
Overall	13.4	18.9	33.9	22.8	11.0

By sending articles or videos to my friends:					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	14.9	21.8	35.1	13.7	14.5
Women	16.6	22.9	39.2	13.5	7.8
Overall	15.9	22.4	37.4	13.6	10.8
Urban samples / Tripoli University					
Men	13.8	23.2	37.0	9.9	16.0
Women	15.8	23.6	37.5	14.7	8.5
Overall	15.0	23.4	37.3	12.7	11.6
Rural samples / Azzawya university					
Men	17.9	17.9	29.9	23.9	10.4
Women	20.0	20.0	46.7	8.3	5.0
Overall	18.9	18.9	37.8	16.5	7.9

By publishing articles or videos on my social media page:					
All samples					
	Always	**Very often**	**Sometimes**	**Rarely**	**Never**
Men	12.2	25.6	31.3	16.7	14.2
Women	14.4	20.7	32.9	15.7	16.3
Overall	13.5	22.8	32.2	16.1	15.4
Urban samples / Tripoli University					
Men	11.2	26.3	33.5	16.8	12.3
Women	14.7	19.7	34.4	15.1	16.2
Overall	13.2	22.4	34.0	15.8	14.6
Rural samples / Azzawya university					
Men	14.9	23.9	25.4	16.4	19.4
Women	13.3	25.0	26.7	18.3	16.7
Overall	14.2	24.4	26.0	17.3	18.1

Q 17: Participants' opinions of the Internet

How do you find the Internet?

The Internet is easy and open communication with the world					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.6	2.0	4.1	57.8	34.4
Women	1.8	0.3	3.9	50.5	43.5
Overall	1.7	1.0	4.0	53.6	39.7
Urban samples / Tripoli University					
Men	1.1	1.7	5.1	58.4	33.7
Women	1.5	0.0	4.4	49.1	45.0
Overall	1.3	0.7	4.7	52.8	40.5
Rural samples / Azzawya university					
Men	3.0	3.0	1.5	56.1	36.4
Women	3.2	1.6	1.6	56.5	37.1
Overall	3.1	2.3	1.6	56.3	36.7

The Internet is a means of entertainment					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	12.2	30.1	4.5	39.4	13.8
Women	11.8	25.1	9.1	39.0	15.1
Overall	12.0	27.2	7.1	39.2	14.6
Urban samples / Tripoli University					
Men	10.1	24.0	5.0	46.4	14.5
Women	10.0	21.9	8.9	43.0	16.3
Overall	10.0	22.7	7.3	44.3	15.6
Rural samples / Azzawya university					
Men	17.9	46.3	3.0	20.9	11.9
Women	19.7	39.3	9.8	21.3	9.8
Overall	18.8	43.0	6.3	21.1	10.9

The Internet is a means of modern life					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.1	1.2	4.9	46.5	45.3
Women	0.0	0.9	3.3	51.1	44.7
Overall	0.9	1.0	4.0	49.1	44.9
Urban samples / Tripoli University					
Men	1.7	1.1	5.6	45.2	46.3
Women	0.0	0.7	3.4	49.4	46.4
Overall	0.7	0.9	4.3	47.7	46.4
Rural samples / Azzawya university					
Men	3.0	1.5	3.0	50.0	42.4
Women	0.0	1.6	3.2	58.1	37.1
Overall	1.6	1.6	3.1	53.9	39.8

The Internet is a means which harms local culture					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	12.3	30.7	35.2	15.2	6.6
Women	16.8	26.0	30.0	17.4	9.8
Overall	14.9	28.0	32.2	16.5	8.4
Urban samples / Tripoli University					
Men	12.4	30.3	38.8	12.9	5.6
Women	16.2	25.6	30.8	16.2	11.3
Overall	14.6	27.5	34.0	14.9	9.0
Rural samples / Azzawya university					
Men	12.1	31.8	25.8	21.2	9.1
Women	19.7	27.9	26.2	23.0	3.3
Overall	15.7	29.9	26.0	22.0	6.3

The Internet is a means of communication which harms society					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	9.8	34.3	25.3	22.9	7.8
Women	11.2	29.9	29.9	20.5	8.2
Overall	10.6	31.8	28.0	21.5	8.0
Urban samples / Tripoli University					
Men	7.8	34.1	26.8	24.6	6.7
Women	10.7	27.8	30.4	21.9	9.3
Overall	9.60	30.3	29.0	22.9	8.2
Rural samples / Azzawya university					
Men	15.2	34.8	21.2	18.2	10.6
Women	13.1	39.3	27.9	14.8	3.3
Overall	14.2	37.0	24.4	16.5	7.1

The Internet is a tool for studying					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.4	2.8	5.7	52.8	36.2
Women	1.5	3.6	8.2	51.4	35.3
Overall	1.9	3.3	7.1	52.0	35.7
Urban samples / Tripoli University					
Men	2.8	2.2	3.4	56.4	35.2
Women	1.5	3.7	8.9	51.5	34.4
Overall	2.0	3.1	6.7	53.5	34.7
Rural samples / Azzawya university					
Men	1.5	4.5	11.9	43.3	38.8
Women	1.6	3.3	4.9	50.8	39.3
Overall	1.6	3.9	8.6	46.9	39.1

The Internet is a means of being more effective					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	0.8	5.3	18.0	49.2	26.6
Women	2.4	5.5	11.9	51.1	29.1
Overall	1.8	5.4	14.5	50.3	28.0
Urban samples / Tripoli University					
Men	0.6	5.1	19.2	48.6	26.6
Women	2.6	5.3	10.9	52.6	28.6
Overall	1.8	5.2	14.2	51.0	27.8
Rural samples / Azzawya university					
Men	1.5	6.0	14.9	50.7	26.9
Women	1.6	6.6	16.4	44.3	31.1
Overall	1.6	6.3	15.6	47.7	28.9

The Internet is a means of developing society					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	1.2	2.8	12.1	46.2	37.7
Women	1.8	1.5	8.2	49.7	38.7
Overall	1.6	2.1	9.9	48.2	38.3
Urban samples / Tripoli University					
Men	1.7	2.2	12.8	45.6	37.8
Women	1.9	1.5	9.4	48.1	39.1
Overall	1.8	1.8	10.8	47.1	38.6
Rural samples / Azzawya university					
Men	0.0	4.5	10.4	47.8	37.3
Women	1.6	1.6	3.2	56.5	37.1
Overall	0.8	3.1	7.0	51.9	37.2

The Internet is a means of interactivity and more better than old media					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	4.5	6.9	12.2	44.3	32.1
Women	2.4	10.6	14.0	38.3	34.7
Overall	3.3	9.0	13.2	40.9	33.6
Urban samples / Tripoli University					
Men	4.5	7.3	11.7	44.7	31.8
Women	1.9	10.8	15.3	37.3	34.7
Overall	2.9	9.4	13.9	40.3	33.6
Rural samples / Azzawya university					
Men	4.5	6.0	13.4	43.3	32.8
Women	4.9	9.8	8.2	42.6	34.4
Overall	4.7	7.8	10.9	43.0	33.6

The Internet is a means of freedom of speech					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	0.8	0.8	3.3	40.8	54.3
Women	0.0	0.6	2.7	42.9	53.8
Overall	0.3	0.7	3.0	42.0	54.0
Urban samples / Tripoli University					
Men	1.1	1.1	2.2	42.1	53.4
Women	0.0	0.70%	2.6	43.7	53.0
Overall	0.4	0.9	2.5	43.1	53.1
Rural samples / Azzawya university					
Men	-	-	6.0	37.3	56.7
Women	-	-	3.3	39.3	57.4

Overall	-	-	4.7	38.3	57.0

Q 18: Participants' feelings about the Internet

18.1. Social feelings

Feeling far from my family					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	20.1	36.5	14.9	21.3	7.2
Women	21.6	37.0	16.0	17.9	7.4
Overall	20.9	36.8	15.5	19.4	7.3
Urban samples / Tripoli University					
Men	19.2	36.3	14.3	24.2	6.0
Women	20.8	39.0	15.9	17.0	7.2
Overall	20.2	37.9	15.2	20.0	6.7
Rural samples / Azzawya university					
Men	22.4	37.3	16.4	13.4	10.4
Women	25.0	28.3	16.7	21.7	8.3
Overall	23.6	33.1	16.5	17.3	9.4

Feeling that I expand my relationships:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.8	7.2	10.8	54.2	24.9
Women	1.5	2.2	9.0	56.0	31.3
Overall	2.1	4.4	9.8	55.2	28.5
Urban samples / Tripoli University					
Men	2.2	6.0	12.6	57.1	22.0
Women	1.9	2.7	9.5	54.9	31.1
Overall	2.0	4.0	10.8	55.8	27.4
Rural samples / Azzawya university					
Men	4.5	10.4	6.0	46.3	32.8
Women	0.0	0.0	6.8	61.0	32.2
Overall	2.4	5.6	6.3	53.2	32.5

Feeling of being closer to my friends					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.0	5.7	8.1	53.7	30.5
Women	1.2	3.7	13.3	52.9	28.8
Overall	1.6	4.6	11.1	53.3	29.5
Urban samples / Tripoli University					
Men	1.1	4.4	8.9	57.2	28.3
Women	1.1	3.8	14.4	52.9	27.8
Overall	1.1	4.1	12.2	54.6	28.0
Rural samples / Azzawya university					
Men	4.5	9.1	6.1	43.9	36.4
Women	1.7	3.3	8.3	53.3	33.3
Overall	3.2	6.3	7.1	48.4	34.9

18.2. Cultural feeling:

Feeling scared about its negative affection on society:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	15.4	32.8	30.8	14.6	6.5
Women	14.6	24.5	33.4	17.6	9.9
Overall	14.9	28.1	32.3	16.3	8.4
Urban samples / Tripoli University					
Men	14.9	33.1	32.6	13.8	5.5
Women	14.4	22.4	35.7	16.7	10.6
Overall	14.6	26.8	34.5	15.5	8.6
Rural samples / Azzawya university					
Men	16.7	31.8	25.8	16.7	9.1
Women	15.0	33.3	23.3	21.7	6.7
Overall	15.9	32.5	24.6	19.0	7.9

Feeling as a member of modern society:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	3.6	9.3	17.4	53.0	16.6
Women	1.5	8.0	21.7	47.1	21.7
Overall	2.5	8.6	19.8	49.6	19.5
Urban samples / Tripoli University					
Men	2.8	9.4	17.7	54.7	15.5
Women	1.1	9.1	23.2	44.9	21.7
Overall	1.8	9.2	20.9	48.9	19.1
Rural samples / Azzawya university					
Men	6.1	9.1	16.7	48.5	19.7
Women	3.3	3.3	15.0	56.7	21.7
Overall	4.8	6.3	15.9	52.4	20.6

Feeling that I build and expand many ideas:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.0	1.6	4.8	60.1	31.5
Women	0.9	1.6	6.9	58.8	31.9
Overall	1.4	1.6	6.0	59.3	31.7
Urban samples / Tripoli University					
Men	1.1	1.7	5.0	61.3	30.9
Women	0.8	1.9	7.7	57.9	31.8
Overall	0.9	1.8	6.6	59.3	31.4
Rural samples / Azzawya university					
Men	4.5	1.5	4.5	56.7	32.8
Women	1.7	0.0	3.4	62.7	32.2
Overall	3.2	0.8	4.0	59.5	32.5

18.3. Political feeling:

Feeling free to express my opinion comfortably:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	3.2	6.9	8.9	54.8	26.2
Women	2.5	2.2	9.0	58.2	28.2
Overall	2.8	4.2	8.9	56.7	27.3
Urban samples / Tripoli University					
Men	2.2	7.2	8.8	58.0	23.8
Women	2.7	2.7	10.3	56.7	27.8
Overall	2.5	4.5	9.7	57.2	26.1
Rural samples / Azzawya university					
Men	6.0	6.0	9.0	46.3	32.8
Women	1.7	0.0	3.3	65.0	30.0
Overall	3.9	3.1	6.3	55.1	31.5

Feeling I improved my political ideas					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.0	2.0	7.6	51.4	36.9
Women	0.3	1.2	9.3	54.9	34.3
Overall	1.0	1.6	8.6	53.4	35.4
Urban samples / Tripoli University					
Men	1.1	1.1	7.1	52.2	38.5
Women	0.4	1.1	10.2	54.5	33.7
Overall	0.7	1.1	9.0	53.6	35.7
Rural samples / Azzawya university					
Men	4.5	4.5	9.0	49.3	32.8
Women	0.0	1.7	5.0	56.7	36.7
Overall	2.4	3.1	7.1	52.8	34.6

Feeling comfortable and free:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	4.0	10.1	15.8	52.2	17.8
Women	3.1	8.3	20.4	50.6	17.6
Overall	3.5	9.1	18.4	51.3	17.7
Urban samples / Tripoli University					
Men	2.2	10.5	17.7	54.1	15.5
Women	2.7	8.7	21.2	51.1	16.3
Overall	2.5	9.4	19.8	52.4	16.0
Rural samples / Azzawya university					
Men	9.1	9.1	10.6	47.0	24.2
Women	5.0	6.7	16.7	48.3	23.3
Overall	7.1	7.9	13.5	47.6	23.8

Feeling more effective:					
All samples					
	S. disagree	**Disagree**	**Neither**	**Agree**	**S. agree**
Men	2.8	3.6	6.5	52.2	33.8
Women	0.9	3.4	9.3	54.2	32.2
Overall	1.8	3.5	8.1	54.2	33.3
Urban samples / Tripoli University					
Men	2.8	3.3	7.7	55.2	30.9
Women	0.8	3.8	10.6	54.0	30.8
Overall	1.6	3.6	9.5	54.5	30.9
Rural samples / Azzawya university					
Men	3.0	4.5	3.0	43.9	45.5
Women	1.7	1.7	3.3	55.0	38.3
Overall	2.4	3.2	3.2	49.2	42.1

Appendix B: The survey questionnaires

1. Arabic version

إستبيان حول دور الانترنت في حياة الشباب

عزيزي/ عزيزتي:

يعد هذا الإستبيان أحد عناصر دراسة علمية لتحضير درجة الدكتوراء في الإعلام، حول موضوع تأثير الإنترنت على الشباب, (من سن 18 إلى 25 سنة)، تحديدًا طلاب الجامعات، حيث تحتاج هذه الدراسة إلى إجراء إستبيان لمعرفة استخدامات الإنترنت والإشباعات المتحقق منه من قبل هذه الفئة، لتحديد مدى التأثير الحاصل على المجتمع. إننا نهتم بخبرتك وبأرائك الشخصية، لذا الرجاء الإجابة بأكبر قدر من الدقة, كما نعلمكم أن ألإجابات ستستخدم لغرض البحث العلمي فقط، وبشكل موثوق, فالأستمارة لا تحوي أية تفاصيل شخصية تخص الإسم، أو اللقب، أو العنوان.

أشكركم مقدماً لإهتمامكم بقراءة الأسئلة والمساهمة في إنجاز عمل أكاديمي مهم

محمد عمر - جامعة شيفيلد هالم - المملكة المتحدة: يونيو 2013

بيانات شخصية:

الجنس : ذكر ☐- ☐إنثى

- العمر: ..... بالسنوات (مثلا 18 سنة)

- التخصص؟ .....

- السنة الدراسية؟ 1. السنة الأولى **2.** السنة الثانية **3.** السنة الثالثة **4.** السنة الرابعة

☐ ☐ ☐ ☐

- مكان السكن: .....

*** القسم الأول: إستخدامات الإنترنت**

1. هل تملك كمبيوتر؟ نعم لا

☐ ☐

2. هل تستخدم الإنترنت؟ نعم ــ لا ــ إذا كانت إجابتك **بنعم** إنتقل الي السؤال رقم 3

3. منذ كم سنة وانت تستخدم الانترنت؟

الخيارات	من سنة إلى 4 سنوات	من 4 - 6 سنوات	أكثر من 6 سنوات
الاجابة			

4. ما هو معدل استخدامك للانترنت؟

الخيارات	يوميا	من 3- 5 مرات في الاسبوع	مرة واحدة في الاسبوع
الاجابة			

5. إذا كنت تستخدم الانترنت يوميا,كم ساعة تستخدمه في اليوم؟

الخيارات	أكثر من 5 ساعات يوميا	من 3- 5 ساعات يوميا	من 1 - 2 ساعة يوميا
الاجابة			

6. أين تستخدم الإنترنت؟ |يمكنك إختار أكثر من إجابة واحدة|

الخيار	في البيت	في الجامعة	في مقاهي الانترنت	عبر الهاتف المحمول
الإجابة				

7. هل توجد أي معوقات أو صعوبات في استخدامك للإنترنت؟

" إذا كانت الاجابة **نعم** إذهب للسؤال رقم **8"☐ لا☐نعم**

8. ماهي أهم المعوقات أو الصعوبات في إستخدامك وتصفحك للانترنت ؟ هل هي:

|يمكنك إختيار أكثر من إجابة واحدة|

☐ أ- القيمة المادية (سعر الإنترنت)

☐ب- صعوبات أخرى.

☐ ج- لا توجد أية معوقات أو صعوبات

☐**ب**- التحكم ومراقبة

- القسم الثاني 2:

9. عند البحث عن معلومة معينة، ما مدى سهولة الوصول إليها عبر الإنترنت؟

صعب ☐ سهل ☐

10. لأي سبب ومن أجل أي اشباعات تستخدم الانترنت؟

		لا أوافق بشدة	لا أوافق	لا اعرف	أوافق	أوافق بشدة
1	التمكن من التواصل مع اصدقائي	1	2	3	4	5
2	تخطي الواقع الاجتماعي	1	2	3	4	5
3	مناقشة وتبادل معلومات مع مجموعة الاصدقاء	1	2	3	4	5
4	للحصول على معلومات متنوعة	1	2	3	4	5
5	للحصول على معلومات عن ثقافات اخرى	1	2	3	4	5
6	للتعرف على طرق حياة الدول الاخرى	1	2	3	4	5
7	من اجل الترفيه	1	2	3	4	5
8	للتعبير عن الرأي في قضايا متنوعة	1	2	3	4	5
9	من اجل الاخبار سياسية حول بلادي	1	2	3	4	5
10	من اجل الحصول على معومات سياسية عبر العالم	1	2	3	4	5
11	من اجل الدراسة	1	2	3	4	5
12	من اجل الراحة و الاستمتاع بالوقت	1	2	3	4	5

- القسم الثالث 3:

11- من أجل أي تفاعل تستخدم الانترنت؟

		لا أوافق بشدة	لا أوافق	لا اعرف	أوافق	أوافق بشدة
1	المحادثة مع الاصدقاء	1	2	3	4	5
2	تخطي الواقع الاجتماعي والاسري	1	2	3	4	5
3	ترفيه، وموسيقى، وأغاني، والالعاب	1	2	3	4	5
4	للحصول على معلومات عن الثقافات الاخرى	1	2	3	4	5
5	للحصول على أجابات لمختلف الاسئلة	1	2	3	4	5
6	الاستمتاع بالحرية في التعبير وابداء الرأي	1	2	3	4	5
7	لمتابعة وتلقي الاخبار عبر العالم	1	2	3	4	5
8	لمتابعة الاخبار المحلية والدولية	1	2	3	4	5
9	للمساعدة في واجباتي الدراسية	1	2	3	4	5
10	لتحقيق رغبات خاصة	1	2	3	4	5

12. **هل لديك مواقع مفضلة تتصفحها على الانترنت؟**

نعم☐ ☐ لا لا أدري☐

13. هل لديك موقع او أكثر تتصفحه الإنترنت؟

☐ لا ليس دائماً ☐ ☐نعم

14.ما الذي يجذبك لتصفح الإنترنت والإنتقال عبر المواقع؟

☐ - الموقع أو اسم الجهة التي تديره

☐ - الموضوع والمحتوى

☐ - الأثنين معاً

15. إلى أي مدى تتصفح المواقع التالية؟ "حدد درجة اتفاقك مع الخيارات بوضع علامة في الخانة المناسبة |

	الموقع	دائماً	أكثر الأحيان	بعض الأحيان	نادراً	لا افعل ذلك
1	E-mailsالإيميلات	5	4	3	2	1
2	ماسنجر او سكايب Messenger or Skype	5	4	3	2	1
3	YouTubeاليوتيوب	5	4	3	2	1
4	Facebookفيسبوك	5	4	3	2	1
5	مواقع دراسية وعلمية	5	4	3	2	1
6	Googleقوقل	5	4	3	2	1
7	مواقع تتعلق بالتجارة والتسوق	5	4	3	2	1
8	مواقع تخص أخبار سياسية عن ليبيا والعالم	5	4	3	2	1
9	مواقع تتعلق بأخبار الرياضية والموسيقى والأغاني	5	4	3	2	1
10	مواقع خاصة	5	4	3	2	1
11	تويتر Twitter	5	4	3	2	1

16. كيف يكون تفاعلك مع المواضيع على شبكة الانترنت؟ "حدد درجة اتفاقك مع الخيارات بوضع علامة في الخانة المناسبة"

الرقم	نوع التفاعل	دائماً	أكثر الأحيان	بعض الأحيان	نادراً	لا افعل ذلك
1	كتابة تعليقات	5	4	3	2	1
2	الاحتفاظ بالنص أو طباعته	5	4	3	2	1
3	قرأت متعلقات بالموضوع	5	4	3	2	1
4	مشاهدة الفيديو	5	4	3	2	1
5	إرسال النص الى لااصدقاء	5	4	3	2	1
6	إعادة نشر الموضوع على صفحتى الخاصة	5	4	3	2	1

17- ما رأيك في الانترنت؟

		لا أوافق بشدة	لا أوافق	لا اعرف	أوافق	أوافق بشدة
1	تواصل مفتوح وسهل مع العالم	1	2	3	4	5
2	وسيلة ترفيه					
3	وسيلة حضارية	1	2	3	4	5
4	وسيلة تضر بالثقافة المحلية	1	2	3	4	5
5	وسيلة تضر بالمجتمع	1	2	3	4	5
6	وسيلة دراسية	1	2	3	4	5
7	وسيلة تجعلك اكثر نشاط وتفاعل	1	2	3	4	5
8	وسيلة تطور للمجتمع	1	2	3	4	5
9	وسيلة تفاعل افضل من وسائل الاعلام القديمة	1	2	3	4	5
10	وسيلة تظور حرية التعبير	1	2	3	4	5

18- من خلال استخدامك للانترنت، ما هو شعورك نحو استخدامها؟

		لا أوافق بشدة	لا أوافق	لا اعرف	أوافق	أوافق بشدة
1	أحس انها تبعدني عن أسرتي	1	2	3	4	5
2	أحس انها توسع علاقاتي					
3	أحس انها تجعلني قريب من أصدقائي	1	2	3	4	5
4	أحس بالرعب من تأثيرها السلبي على المجتمع	1	2	3	4	5
5	أحس أنني احد أعضاء المجتمع المتطور	1	2	3	4	5
6	أحس انها توسع وتبني معلوماتي					
7	أحس بالحرية والراحة في التعبير عن ارائي	1	2	3	4	5
8	أحس انها تطور معلوماتي السياسية	1	2	3	4	5
9	أحس بالراحة والحرية	1	2	3	4	5
10	أحس انني اكثر تفاعل ونشاط	1	2	3	4	5

Survey questions, English version

The role of the Internet on young people's lives,

Libya case of study

Dear

My name is Mohamed Omar. I am PhD student at Sheffield Hallam University. The project will help me gain experience of research. I am carrying out a research project to see the influence of the Internet on young people lives. I am inviting Universities students to answer these questions which will be kept strictly confidential. Student's results are identified by code number not name.

Thank you for taking the time to read and answer these academic questions which is based on education purpose.

Mohamed Gharssalla, UK, Jun 2013

- Your profile:

- Gender. ……. Male ……. Female

- Age. …….. **- Discipline: ……..**

- Year of study. …. First Year …. Second Year …. Third Year …. Forth Year

- Area of living: …….

Section A:

1. Do you have a computer? …..Yes. …… No.

2. Do you use the Internet? …… Yes. …… No.

3. How many years have you been using the Internet?

Options	From1-4 years	From4-6 years	More than 6 years

4. How often do you use the Internet?

Option	Every day	3-5 times a week	1 time a week

5. If you use the internet every day, how many hours do you go online?

'Please monition frequency of your use'

Options	More than 5 hours	From 3-5 hours	From 1-2 hours

6. You use the Internet from? 'You can mention more than one choice'

-------- Home

-------- University labs

------- Internet café 'Cybercafé'.

------- Mobile phone

7. Did you find any difficulties when you are using the Internet?

- Yes - No

If the answer is no, please go to question number 9

8. What obstacles or difficulties have you experienced in using the Internet?

'You can mention more than one choice depending where you use the Internet'

---------- The cost, 'price'

---------- Other difficulties.

---------- No obstacle or difficulties.

---------- Control and monitor

Section B:

9. How do you describe the Internet navigation to satisfy your needs?

'Please monition frequency of your agreement with these choices

- …. Easy. - …..Difficult

10. For which purposes and gratifications do you use the Internet?

		Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
1	To make contact with my friends	1	2	3	4	5
2	To override social monitoring	1	2	3	4	5
3	To share and discuss information with groups of friends	1	2	3	4	5
4	To have new information	1	2	3	4	5
5	To have information about other cultures	1	2	3	4	5
6	To have ideas about lifestyles in other countries	1	2	3	4	5
7	For entertainment	1	2	3	4	5
8	To express my opinions about various issues	1	2	3	4	5
9	For political news about your country	1	2	3	4	5
10	To find political information from around the world	1	2	3	4	5
11	For studying	1	2	3	4	5
12	To relax and enjoy time	1	2	3	4	5

Setion C:

11. **For which online interactivities do you use the Internet?**

'Please mention frequency of your agreement with these choices'

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	Chatting with friends	1	2	3	4	5
2	To escape from society pressures and family social control	1	2	3	4	5
3	For leisure, entertainment, music, videos games	1	2	3	4	5
4	To gain knowledge about other culture	1	2	3	4	5
5	To find answers to any questions	1	2	3	4	5
6	To enjoy more freedom of speech and express my opinion	1	2	3	4	5
7	To receive news about the world	1	2	3	4	5
8	To follow local and international news	1	2	3	4	5
9	To help me do my homework	1	2	3	4	5
10	For my personal needs	1	2	3	4	5

12. Do you have set of favourite's sites you regularly visit?

------- Yes

------- No

------ Don't know.

13. Do you having one or more site you visit every time you use Internet?

------- Yes

------- No

------ Not often

14. What specifically purposes persuade you brows a site?

----- The publisher or title of site. (e.g. BBC,

----- The content of site. (E.g. Title or subject of site)

----- Both

15. To what extent are the following used?

'Please monition frequency navigating these sites'

		Never	**Rarely**	**Sometimes**	**Very often**	**Always**
1	Accessing emails	1	2	3	4	5
2	Messenger and Skype	1	2	3	4	5
3	YouTube	1	2	3	4	5
4	Facebook	1	2	3	4	5
5	Accessing academic websites	1	2	3	4	5
6	Google	1	2	3	4	5
7	Accessing commercial and shopping sites	1	2	3	4	5
8	Accessing international and Libyan news	1	2	3	4	5
9	Accessing sport and music websites	1	2	3	4	5
10	Going online for personal needs sites	1	2	3	4	5
11	Twitter	1	2	3	4	)5

Section D:

16. How do you interact with internet site? 'Please monition frequency of interact with content'

		Never	Rarely	Sometimes	Very often	Always
1	Writing comments on social media	1	2	3	4	5
2	Saving or printing out articles	1	2	3	4	5
3	Reading longer article	1	2	3	4	5
4	Watching videos	1	2	3	4	5
5	Sending articles or videos to friends	1	2	3	4	5
6	Re-publishing articles or videos on my social media pages	1	2	3	4	5

17. How do you find the Internet?

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	Open and make it easy to communicate with the world	1	2	3	4	5
2	Mean of entertainment	1	2	3	4	5
3	Mean of modern life	1	2	3	4	5
4	Mean which harm local culture	1	2	3	4	5
5	Mean which harm society	1	2	3	4	5
6	Studying tool	1	2	3	4	5
7	Mean of being more engaged	1	2	3	4	5
8	Mean of developing society	1	2	3	4	5
9	Better mean of interactivity than old media	1	2	3	4	5
10	It increases freedom of speech	1	2	3	4	5

18. Describe your feeling about the Internet.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	Feeling far from my family	1	2	3	4	5
2	Feeling that I expand my relationship	1	2	3	4	5
3	Feeling being closer to my friends	1	2	3	4	5
4	Feeling scarred about the Internet negative effect on society	1	2	3	4	5
5	Feeling like a member of modern society	1	2	3	4	5
6	Feeling that I develop and expand my ideas	1	2	3	4	5
7	Felt free to express my opinion comfortably	1	2	3	4	5
8	Feeling that I improved my political ideas	1	2	3	4	5
9	Feeling comfortable and free	1	2	3	4	5
10	Feeling more effective	1	2	3	4	5

Appendix C: Letters for acceptance of attending parents and media experts' interview

1. Letters for parents interview (Arabic version)

طلب موافقة على إجراء مقابلة لغرض البحث العلمي

أكتب إليكم لأدعوكم للمشاركة في إستكمال متطلبات بحثي الاكاديمي، أنا طالب دراسات عليا في وسائل الإعلام والاتصال في جامعة شيفيلد هالام، حيث أحضر درجة الدكتوراء في موضوع تأثير الإنترنت على الشعب الليبي الشباب، وظهور مجتمع جديد، هذا يحتاج إلى جمع بعض البيانات التكميلية من خلال مقابلة اولياء امور الشباب من خلال طرح بعض الأسئلة حول استخدام أبنائهم للإنترنت

أتمنى شاكرا الموافقة على المشاركة في هذه المقابلات التي سوف تستغرق فقط من 20 إلى 30 دقيقة في المدرسة الليبية في شيفيلد ايام السبت من كل اسبوع في 4 – 11- 18 يناير 2014.
مشاركتكم ستساعد في إتمام هذا البحث بالحصول على البيانات الضرورية لإستكمال الاطروحة، وسوف تستخدم البيانات المقابلات فقط لهذا البحث لن يدون او يسجل اي اسم أو عنوان للمشاركين.

إنني بالتأكيد أقدر مشاركتك، وإعطائنا جزء من وقتك الثمين لمساعدتي في إستكمال شرط البحوث الأكاديمية.

تقبلوا فائق التقدير والاحترام

الباحث: محمد عمر غرس الله

قسم الاعلام والتواصل

جامعة شيفيلد هالم – المملكة المتحدة

2. Letter for parents interview (English version)

Dear

I am writing to invite you to participate in research project investigate 'The role of the Internet in university students' lives, Libya case study'.

The aim of this study is to gain results for understanding role of the Internet in society and it needs to gain information from Libyan young people parents in the UK.

The Interview questions will be around university students' use of the Internet and Internet issue in Libyan family. The estimated time to have interviewed is between 20 to 30 minutes in Libyan school in Sheffield on Saturdays; 4th, 11th and 18th January 2014.

Your participation would help to gain important data for this project and all data of interview will only use for an academic research without mentioned any name or address.

Thank you for helping to do this academic research.

Kind regards,

Mohamed O. A Gharssalla

PhD Candidate

Media and communication

Sheffield Hallam University

Appendix D: the semi-structure Interviews Questions

1. Interview experts' questions

To assess the influence of the Internet on young people's lives, and emerge of a new society

Question One

Do you think that young people rely on the Internet to obtain new information?

Question Tow

What is your expectation about the purpose of their online navigation?

Question Three

Do you think that the Internet affects young people?

Question Four

What kind of role does the Internet have in university students' lives?

Question five

What do you think about the Internet's role in society?

Question six

Do you think that the Internet make young people remote from society?

Question seven

Do you think that the Internet is leading to the emergence of a new form of society?

At the end of every interview, each participant was asked if he/she want to add any more information or comments related to interview subject or questions content.

2. Interview parents' questions

Question One

Do you have an Internet connection at home?

Question Tow

Do you supporting your son / daughter in using the Internet?

Question Three

Do you monitor your son's / daughter's use of the Internet?

Question Four

Do you think that the Internet is being important in your children live?

Question Five

Do your children attach special significance to the Internet?

At the end of every interview, each participant was asked if he/she want to add any more information or comments related to interview subject or questions content.

Appendix E: List of Academic researchers

Name	E-mail	Occupation	
Dr Elareshi, Moktar	arishimok@hotmail.com		Helping with survey design and checking translation
Dr Essager, Ali	ali_mohamedelsagher@yahoo.com	A lecturer at Tripoli University, Faculties of social science	Checking survey questions and translation
Dr Al-Asfar, Mohamed	Al_asfar@hotmail.com	Head department of Media, University of Azzetona, Libya	Checking Interview question and translation
Mr Saied, Hasan Omar	alrujfbane@yahoo.com	Lecturer social science at Az-Az-Zaway University	Checking survey questions and supervision of survey data collection
Dr Salem, Mohamed	m_salem1965@yahoo.com		
Mr Somaidai, Hassan	Hassan.M.Somili@student.shu.ac.uk	Media PhD candidat	Cheking survey and interview questions and translation

Appendix F: Letters for surveying samples in universities.

1. **Arabic virsion.**

06.05.2013

الى: جامعة طرابلس / جامعة الزاوية

عن طريق قسم أعضاء هيئة التدريس

تحية طيبة

أنا اقوم بتحضير درجة الدكتوراء في مجال الميديا والتواصل، وتأثير الانترنت على الشباب، حيث تستهدف الدراسة استبيان طلبة الجامعات الليبية كعينة من الشباب الليبي يمكن الوصول اليها بسهولة اوقات الدراسة وتحت إشراف ادارة الكليات، ولتفادي أي عوائق في الشارع العام نتيجة لظروف البلاد، عليه، بناء على موافقتكم المسبقة، أتمنى تعاونكم ومساعدتكم في إجراء الاستبيان وفق الشروط العلمية وتحت إشرافكم حسب الارشادات المرفقة مع الاستمارات، مع كامل الشكر والامتنان.

تجدون الاستمارات مرفقة الارشادات الواجب اتخاذها عند توزيع استمارات الاستبيان كما هو متفق مع إدارة الجامعة.

وتفضلوا بقبول فائق التقدير والاحترام

التوقيع:

محمد عمر غرس الله

جامعة شيفيلد هالم – المملكة المتحدة

2. **English version.**

Tripoli and Azzawya Universities

Education and art faculties

06.05.2013

To whom it may concern

I am doing a research of PhD Media and Communication, the aim of this research is to explore and understand the influence of the Internet on young people's lives. Therefore this study aimed to survey Libyan universities students at studying time. This for avoiding any problem regarding Libyan case and to ensure number of samples, seriousness of answering survey questions and time spend under the supervision of faculties departments who would follow direction attachment with survey.

Please, find indication of survey steps as agreed by faculty departments and University guide.

I certainly appreciate your help, your valuable time, and kindness in helping me to complete academic research condition.

Respectfully yours

Mohamed O. A Gharssalla

Sheffield Hallam University

UK

3. Letter from Azzawya university

Ministry Of Higher Education
And Scientific Research
University Of Zawia
General Administration

وزارة التعليم العالي
و البحث العلمي
جامعة الزاوية
الإدارة العامة

الرقم الإشاري: ج ز/ 8/ 5/ 14 هـ الموافق: / / 14 هـ التاريخ: 12 / 1 / 15 20 م

إلى من يهمه الأمـــر .

بعد التحية ...

نفيدكم ... بأن الاستبيان المرسل من **الطالب / محمد عمر غرس الله** الموفد للدراسة بالخارج لتحضير درجة الدكتوراه قد تم بكليات التابعة لجامعة الزاوية (كلية الهندسة – الآداب الزاوية – الآداب زوارة - الآداب يفرن) لعدد مئتان نسخة تحت أشراف **الاستاذ / أ . حسين عمر سعيد** أستلم منها 94 نسخة بتاريخ 12 / 5 / 2013 حسب القواعد العلمية المعمول بها بجامعتنا .

هذا للعلم واتخاذ إجراءاتكم بالخصوص

والســـــلام عليكم

أ.د..عبد الحكيم البشير الذويك.
وكيل عام الشؤون العلمية
بالجامعة المكلف

صورة منه .
السيد العميد/رئيس الجامعة .
مكتب التخطيط والمتابعة .
م. الصادر الدوري العام .
د.عبد الحكيم ك . م .

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البريد الإلكتروني info@zu.edu.ly

4. Translation of letter from Azzawya university

Ministry of Higher Education

And Scientific Research

University of Zawia

N: 8/5/R G

To whom it may concern

We would like to inform you about that Mohamed O. Gharssalla's survey has been carried out in Azaway University (engendering, Zawia art faculties, Zwara art faculty, and Yefren art faculties). It has been done under the supervision of Dr, Hassan Omar Said in 12 May 2013 and academic terms, and conditions were considered.

Pease be upon you

Professor Abdulhakeem ElBasheer Azweek

General Deputy of academic affairs

Copy to:

- Head of university department
- Planning office
- General archive department